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ABSTRACT

These programmed instructional materials for part 2 of a secondary-postsecondary subcourse in club management operations are one of a number of military-developed curriculum packages selected for adaptation to vocational instruction and curriculum development in civilian settings. This part of the subcourse consists of three lessons and an examination. Lessons focus on two topics: (1) determination of meal costs and menu pricing and (2) determination of food cost percentages. Also included in the course is a panel book of supplementary information and forms and a special text. (LRA)

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Military Curricula for Vocational & Technical Education

CE 028 785

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

CLUB RESTAURANT OPERATIONS, PART II
9-10

THE NATIONAL CENTER
FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY

OEC 2

This military technical training course has been selected and adapted by The Center for Vocational Education for "Trial Implementation of a Model System to Provide Military Curriculum Materials for Use in Vocational and Technical Education," a project sponsored by the Bureau of Occupational and Adult Education, U.S. Department of Health, Education, and Welfare.

MILITARY CURRICULUM MATERIALS

The military-developed curriculum materials in this course package were selected by the National Center for Research in Vocational Education Military Curriculum Project for dissemination to the six regional Curriculum Coordination Centers and other instructional materials agencies. The purpose of disseminating these courses was to make curriculum materials developed by the military more accessible to vocational educators in the civilian setting.

The course materials were acquired, evaluated by project staff and practitioners in the field, and prepared for dissemination. Materials which were specific to the military were deleted, copyrighted materials were either omitted or approval for their use was obtained. These course packages contain curriculum resource materials which can be adapted to support vocational instruction and curriculum development.

CLUB RESTAURANT OPERATIONS, PART II
QM 372

Correspondence Course 9-10

Developed by:
U.S. Army

Occupational Area:
Food Service

Development and Review Dates:
January 1974

Print Pages:
163

Availability:
ERIC
National Center Clearinghouse

Suggested Background:

QM 371-1, Club Restaurant Operations, Part I

Target Audiences:

Grades 10 - Adult

Organization of Materials:

Lesson objectives, text readings, self-tests, answers, examination

Type of Instruction:

Individualized, self-paced, programmed

Type of Materials:	No. of Pages:	Average Completion Time:
Sequence C - Open Mess Food Cost Control: Determination of Meal Costs and Menu Pricing	30	Flexible
Sequence D - Open Mess Food Cost Control: Determination of Food Cost Percentages	11	Flexible
Panel Book - Open Mess Food Cost Control	28	Flexible
Special Text - Club Restaurant Operations	69	Flexible
Examination	12	Flexible

Supplementary Materials Required:

None

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
OSU The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210
(614) 486-3655

Course Description:

This subcourse is a continuation of QM 371-1, Club Restaurant Operations, Part I. This subcourse is of interest to all food service personnel. It is of particular interest to supervisory personnel involved in or anticipating involvement in club restaurant operations. Successfully completed, this subcourse will provide the student with a skill in applying food cost controls and procedures for a club restaurant. With this skill, the student will be able to perform the diverse club restaurant operations covered in this subcourse and in subcourse QM 371. In addition, the student will be able to train and supervise others in these operations. This subcourse consists of 3 lessons and an examination totaling 5 credit hours of correspondence course study.

Lesson 1 - Determination of Meal Costs and Menu Pricing - In this lesson you will learn how to determine the cost to the open mess of meals based on this food cost. You will be able to determine the cost per cooked portion, food cost percentage and the portion selling price of single menu items with or without a loss factor, by using formulas and tables. Also covered are determining the cost per cooked portion of a single menu item having several ingredients, determining the food cost of a table d'hote meal, and pricing the meal based on its cost and the food cost percentage of the open mess, by using formulas and tables. Differences between gross profit and net profit are discussed.

Lesson 2 - Determination of Food Cost Percentages - This lesson covers determining food cost percentages for a single item and for a meal; determining food cost percentages for the open mess for a day, and accumulated food cost percentages for a week, a month, or a year.

Lesson 3 - Review

The lessons are organized using programed instruction materials. These are self-teaching media which provide the student with the opportunity for immediate learning. Also included in the course are an examination, panel book of supplementary information and forms, and a special text. This subcourse includes basic as well as supervisory materials.

CLUB RESTAURANT OPERATIONS, PART II
QM 372

CORRESPONDENCE COURSE

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Examination	151

INSTRUCTION BOOKLET

U.S. ARMY QUARTERMASTER SCHOOL
CORRESPONDENCE SUBCOURSE

QM 372

CLUB RESTAURANT OPERATIONS

PART II

STUDY MATERIAL:

161 PT, Sequence C
161 PT, Sequence D
161 PB
ST 10-154-2

ATTENTION

Please check the study material you received against that listed above. If any discrepancy exists, notify the Department of Army Wide Training Support of the Quartermaster School immediately.

Prepared by
United States Army Quartermaster School
Fort Lee, Virginia 23801
Supply Training Center of the Army School System
JANUARY 1974

...rmy-Fort Lee, Va.-516-74-300--4

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QM 372 CREDIT HOURS: 5

CLUB RESTAURANT OPERATIONS, PART II

SECTION I

INTRODUCTION

1. SCOPE. This subcourse covers meal costs, menu pricing, and food cost percentages. Included are procedures for determining cost per cooked portion, selling price for single menu items, loss factors, food cost for table d'hote meals, and the use of tables and formulas in pricing meals.

2. APPLICABILITY. This subcourse is of interest to all food service personnel. It is of particular interest to supervisory personnel involved in or anticipating involvement in club restaurant operations. Successfully completed, in conjunction with QM 371-1, Club Restaurant Operations, Part I, this subcourse will provide the student with a skill in applying food cost controls and procedures for a club restaurant. With this skill, the student will be able to perform the diverse club restaurant operations covered in this subcourse and in subcourse QM 371. In addition, he will be able to train and supervise others in these operations.

3. COMPOSITION. This subcourse consists of 3 lessons and an examination totaling 5 credit hours of correspondence subcourse study. (See subcourse contents following section II.)

4. PRIOR STUDY. This subcourse is continuation of QM 371-1, Club Restaurant Operations, Part I; therefore, a student should have completed QM 371-1 prior to applying for this subcourse. If the student requires initial training in club restaurant operations, he should apply for and complete QM 371-1 before proceeding with this subcourse.

5. FURTHER STUDY. Upon successful completion of this subcourse, it is recommended that the student apply for: QM 394, Food Service Sanitation; QM 454, Food Preparation; and QM 500, Open Mess Food Service.

SECTION II

ADMINISTRATIVE INSTRUCTIONS

6. MATERIALS CHECK. The student should check carefully to make sure that the subcourse packet includes materials listed on the cover of this instruction booklet, to insure that all pages in texts are readable and that texts are complete, and to insure that the subcourse number on the examination answer form corresponds with the number of this subcourse. Any discrepancy should be noted on a Student Inquiry Sheet (QMFL Form 101) and mailed to the Quartermaster School. The student should make certain that his social security account number, mailing address, and ZIP code number are entered on the address side of the form.

7. SUBCOURSE ORGANIZATION. This subcourse uses the following materials:

a. LESSON TEXTS. The lessons are organized using programed instruction materials. These are self-teaching media which provide the student with the opportunity for immediate learning. Each lesson uses a programed text (PT). Because each PT uses a question-and-answer technique, no lesson exercises are provided. Thus, the student will not be given lesson answer forms to be returned for grading.

b. EXAMINATION BOOKLET. Unlike other subcourses, the examination is included in the subcourse packet. The examination booklet should not be opened until all the lessons have been studied.

8. SUBCOURSE CREDIT. Upon successful completion of the examination, the student receives credit for the total hours of the subcourse.

9. EXAMINATION ANSWER FORM. Quartermaster School students must use the machine-process answer form included in the subcourse packet. The examination will be machine graded; thus, the answer form cannot be bent or mutilated. (See NIPUB 202, Administrative Notice to Correspondence Subcourse Students, for further instructions on the use of the machine-process answer form.) Students of other schools should use answer forms provided by their schools.

10. RECOMMENDED STUDY PROCEDURE. To derive the greatest benefit from this subcourse, it is recommended that the student adopt the following study procedure:

a. Set aside certain periods for studying, and follow a planned schedule.

b. Read carefully the instructions in the programed text for lesson 1. These instructions apply to all the programed texts in this subcourse.

c. For each lesson, study the objectives in the programed text before starting to work the program. This will assure a firm understanding of what you should be able to do as a result of successful completion of the program.

d. Starting on the first page of each program, complete the program by reading each frame in turn and, if indicated, by answering questions. All answers to questions are based on knowledge you have gained from previous frames. If you have any queries regarding the subject matter, use the Student Inquiry Sheet (QMFL Form 101) for the lesson on which you are working.

e. After you have studied all lessons and feel that you have sufficient knowledge of the subject matter, open the examination booklet. Read all directions first then study and complete the examination exercises. Bear in mind that your answers must be based on the study assignments, not on your personal experience or on information from other sources.

f. Double check the answer to each examination exercise before indicating your final answer on the answer form. Return the examination answer form to the Quartermaster School.

QM 372 Credit Hours: 5 8

SUBCOURSE CONTENTS

		Credit Hours	*Booklet
LESSON 1	Determination of Meal Costs and Menu Pricing	2	161PT, Sequence C (Frames C1 - C40)
LESSON 2	Determination of Food Cost Percentages	1	161PT, Sequence D (Frames D1 - D18)
LESSON 3	Review	1	161PT, Sequences C&D (Frames C41 - C55 and D19)
EXAMINATION		1	EXAM 372

IMPORTANT!

Each programed text (PT), in conjunction with appropriate supplementary materials, contains all information required to complete one lesson. Complete the lessons for this subcourse in the sequence shown above.

* General title for all programed texts (PT's) is Open Mess Food Cost Control. The panel book, 161PB, should be used in conjunction with the PT's. The special text (ST 10-154-2, Club Restaurant Operations) provides additional information which will reinforce and increase the knowledge gained from completion of this subcourse. Computations in ST 10-154-2 are not based on current prices.

SEQUENCE C

FOR PROGRAMED INSTRUCTION ON

OPEN MESS FOOD COST CONTROL

Subject:

DETERMINATION OF MEAL COSTS AND MENU PRICING

U.S. ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA

SUPPLY TRAINING CENTER OF THE ARMY SCHOOL SYSTEM

SEPTEMBER 1970

This volume supersedes 161 PT, dtd February 1970.

OPEN MESS FOOD COST CONTROL

SEQUENCE C OBJECTIVES

Determination of Meal Costs and Menu Pricing

After completing this sequence of instruction, you will be able to do the following things:

1. Determine the cost per cooked portion, food cost percentage, and the portion selling price of single menu items with or without a loss factor, by using formulas and tables.

2. Determine the cost per cooked portion of a single menu item having several ingredients, such as meat loaf.

3. Determine the food cost of a table d'hote meal, and price the meal based on its cost and the food cost percentage of the open mess, by using formulas and tables.

4. Distinguish between gross profit and net profit.

C1. In this sequence you will learn how to determine the cost to the open mess of meals served and how to price the meals based on this food cost. You learned in Sequence B that the purpose of the food cost control system in the open mess is to control the cost to the open mess of food served to the customer so that he can receive a reasonable amount of food at a fair price and so that the open mess can realize a fair profit. You can see that the cost of food to the open mess determines the price charged the customer for it.

ANSWER: 60% COMPUTATION: 100% - 40% = 60%

C30. Why couldn't you use the mark-up table in panel 5 to price this item? _____

_____.

C2. It is easier to price some food items than others. The cost of a pineapple slice, for example, can be determined by counting the number of slices in a can of pineapple and dividing the number of slices into the price paid for the can of pineapple. A can of pineapple containing six slices and priced at 36¢ would cost the open mess 6¢ a slice.

COMPUTATION:
$$\begin{array}{r} .06¢ \\ 6)\overline{.36} \\ \underline{36} \end{array}$$

This type of information would be valuable in determining how much to charge the customer for a pineapple salad.

ANSWER: Because the mark-up table does not show $.23 and the table is for even cents and even percentages.

C31. Gross profit is the profit you make over and above the cost of the food only. The amount of profit you net, or the net profit, is the amount you actually make over and above the cost of the food, overhead and labor costs, including employee meals.

C3. Costing various wholesale cuts of meat derived from a hindquarter of meat and pricing the portions derived from the wholesale cuts requires specialized training. You must know the cost of the entire wholesale cut if you are to determine the price to charge the customer for each portion served from it. Proper menu pricing is very important as a food cost control. The first step toward menu pricing is to cost the entire menu (determine the cost to you of each item on it and the total cost of the menu to you).

C32. Suppose that you have contracted to serve a banquet at the open mess to 100 persons for $2.50 per person. You desire to clear a net profit of $.50 per person. Your overhead expense to cover the dining hall, lights, etc., is $40.00. Cost of labor and their meals is $60.00. Answer the following questions:

a. How much money are you guaranteed for serving the 100 meals? _____.

b. What is the net profit you desire to clear for the 100 meals? _____.

c. After subtracting the net profit desired from the total amount guaranteed, how much do you have left to spend for overhead, labor, and food cost? _____.

C4. Costing items of food, whether they are sold separately or as a part of a larger item, depends upon an accurate determination of the cost of a given portion of that particular food. It is based on the size of the portion; the state of the food item (whether fresh or frozen); expected loss in preparation; and quantity of food required to meet the demand. In figuring portion cost per person for the entire menu we always carry out the computation to four places beyond the decimal (see panels 9 and 11). For example, a portion cost of 20¢ would be written $.2000 when costing the entire menu.

---

a. ANSWER: $250; COMPUTATION: 2.50 X 100 = 250.00

b. ANSWER: $50; COMPUTATION: 100 X .50 = 50.00

c. ANSWER: $200; COMPUTATION: 250. - 50. = 200.00

C33.

d. What is your total overhead and labor cost, including employee meals? _____.

e. How much money do you have left with which to purchase food? _____.

f. What percentage is this amount of the total amount guaranteed ($250.00)? _____.

C5. Let's work a simple problem now in figuring portion cost, or the cost per person of one portion to the open mess. The cost of a can of tomato juice is $.21. There are 32 ounces in the one-quart can of tomato juice. How much does one ounce cost? Divide 32 oz. into $.21 to see how much one ounce costs:

$$
\begin{array}{r}
\$.0066 \\
32\overline{)}.2100 \\
\underline{192} \\
180 \\
\underline{160} \\
20
\end{array}
\quad = \text{ cost of one ounce}
$$

One serving portion of tomato juice consists of three ounces. How much does one serving portion cost the open mess? Multiply $.0066 by 3:

$$
\begin{array}{r}
\$.0066 \\
\times \quad 3 \\
\hline
\$.0198
\end{array}
\quad = \text{ cost of one portion (cost per person)}
$$

---

d. ANSWER: $100; COMPUTATION: 60.00 / 40.00 = 100.00

e. ANSWER: $100; COMPUTATION: 200.00 - 100.00 = 100.00

f. ANSWER: 40%; COMPUTATION: $250.\overline{)100.00}$ (.40%)

C34.

g. This 40% is called the _____ _____ percentage.

h. How much then is your gross profit percentage? _____.

i. How much is your net profit percentage of the total amount guaranteed or collected? _____.

C6. Turn to panel 11. This is a cost control sheet showing the cost per person (cost per portion) to the open mess of each item in a dinner meal. We have already figured the cost per person of the tomato juice ($.0198). You can see that the cost per person of all items on the sheet in panel 11 added together equals $.5131, which is the cost of the entire meal to the open mess, or the amount it costs the open mess to serve this particular meal to the customer. This total food cost is important in figuring the menu selling price, which we shall do later in this sequence.

---

g. food cost.

h. 60%; COMPUTATION: 100% - 40% = 60%.

i. 20%; COMPUTATION:
$$250.\overline{)50.00}\quad .20\%$$

C35. You can see that although you collect $250.00 (100%) you will have a gross profit of only $150 (60% of $250) after deducting $100 (40% food cost) and that after deducting another $100 (40%) for overhead and labor from your gross profit you will have a net profit of only $50 (20%), which is $.50 per person. COMPUTATION:

250.00	collected =	100%
-100.00	food cost =	- 40% food cost %
150.00	gross profit =	60% gross profit %
- 100.00	overhead & labor -	40% of amount collected
50.00	net profit =	20% net profit %

C7. Let's look at the roast turnkey in panel 11. There is no loss factor (shrinkage or waste) for cooked, boned, and rolled roast turkey. It is ready to serve. There are three ways in which we can figure the cost per person of $.2000 (20¢). One way is to figure that if one pound (16 ounces) costs us $.40, then 8 ounces (size of portion) costs us 1/2 of $.40 or $.20 ($.2000). Another way is to divide 16 ounces into $.4000 (cost of one pound) to get $.025, the cost of one ounce, then multiply $.025 by 8 ounces to get $.2000. The third way is to use formula No. 3 in panel 6. It says to multiply the price per pound ($.40) by the portion size (8 ounces) and to divide the result by 16 ounces. This formula is for items with no loss factor.

C36. Look at the definitions in frame C31 of gross profit and net profit and compare them with the computation in frame C35. This will give you a clear understanding of the difference between gross profit and net profit.

C8. The computation would be as follows:

$$\frac{.40 \times 8}{16} = \frac{3.20}{16} = \frac{\$.2000}{16)3.2000}$$

It doesn't matter which way you figure it, and it is usually to your advantage to use the simplest formula for the particular problem at hand. Formula No. 3 in panel 6 is the best formula to use in most problems regarding items with no loss factor. Let's try some simple problems now:

PROBLEM 1. Portion controlled meat (having no loss factor) costs the open mess $1.05 per pound. What is the cost to the open mess of a 6-ounce portion? _____.

C37. When you have determined that the selling price of an item is a figure like $.46, the accepted practice is to round off the figure to the nearest nickel, or to $.45. You would seldom see a menu item priced at $.46.

1. ANSWER: $.394. COMPUTATION: 16 oz.)$1.050 — $.0656 per oz.

$.0656 x 6 oz. = $.394

OR

(Formula #3, panel 6) $\frac{\$1.05 \times 6 \text{ oz.}}{16 \text{ oz.}} = \frac{\$6.30}{16} = 16)\$6.30$ — $.3937 or .394 (rounded off)

C9. PROBLEM 2. Orange juice costs the open mess $.40 a quart (32 oz). Portion size of orange juice is 4 ounces. How much is the cost per person (portion cost)? _____.

C38. Now let's practice by costing a table d'hote menu meal. Turn to panel 15. This is a complete table d'hote menu for the dinner meal in the open mess. Below it is the cost control sheet listing all food items needed for the menu (meal), their portion sizes, total amount to purchase per portion, unit of purchase, and cost per unit. Complete the cost control sheet by figuring and posting the portion cost for each food item. Total the portion costs at the bottom and post the total food cost. Then return to this text and continue with the course.

2. ANSWER: $.0500. COMPUTATION: $4\text{ oz.})\overline{32\text{ oz. (1 qt)}}$ $\quad 8$

$$8\overline{).4000}\quad .0500$$

OR

$$32\text{ oz.})\overline{.4000}\quad .0125\text{ per oz.}$$

$$\begin{array}{r} .0125 \\ \times\ \ 4 \\ \hline .0500 \end{array}$$

C10. Let's continue on with our figuring the cost of the entire meal in panel 11. Look at fresh asparagus spears. You can see that a bunch cost the open mess $.35. If 1/7 of a bunch is served to the customer, it will cost 1/7 of $.35, or $.0500.

C39. How did you get along with your portion costs? Turn now to panel 16 and compare your answers with the ones in panel 16 and change any that you got wrong.

C11. The way the 3-ounce portion size was arrived at (panel 11) for fresh asparagus was that the bunch was found to weigh 21 ounces. If 1/7 of the bunch is to be served, it will weigh 1/7 of 21 ounces, or 3 ounces. Baking potatoes cost the open mess $.06 per pound. There are four potatoes to the pound. Therefore, each potato weighs 1/4 of 16 ounces, or 4 ounces. Each potato costs the open mess 1/4 of $.06, or $.0150. COMPUTATION:

$$
\begin{array}{r}
.0150 \\
\hline
4).0600 \\
\underline{4} \\
20 \\
\underline{20} \\
0
\end{array}
$$

C40. Now that you know the total food cost of your table d'hote menu or meal, how much are you going to charge the customer for it? (Your open mess anticipated gross profit percentage is 60%). _____.

C12. Lettuce wedges are figured the same way as the asparagus spears. If a head of lettuce costs $.10, and 1/5 of a head is the portion size, then the portion cost will be 1/5 of $.10, or $.0200. French dressing cost $2.50 per gallon (128 ounces). If the portion size is 1 ounce, the portion cost will be 1/128 of $2.50, or $.0195.

COMPUTATION:

```
      .0195
128)2.5000
   1 28
   1 220
   1 152
     680
     640
      40
```

ANSWER: $2.95; COMPUTATION: 100% - 60% = 40% food cost percentage

```
      2.95
40.)118.20
    80
    38 2
    36 0
     2 20
     2 00
       20
```

OR

```
  1.1820
x  2.5   (panel 14)
  5 9100
 23 640
2.95500  (to nearest nickel)
```

C41. See next frame.

C13. Hot rolls cost the open mess $.18 a dozen. Divide 12 into $.18 to get cost per roll of $.015. Multiply $.015 by 2 rolls to get the cost per portion of $.0300. OR figure that if the portion size is two rolls, divide 2 into 12 (one dozen) to see what portion of the dozen that the portion size is (1/6). Divide 6 into the cost per dozen ($.18) to get $.0300 as the portion cost. Coffee comes in 2-pound cans costing $2.03. The two pounds yield 50 cups of coffee. Therefore, each cup will cost 1/50 of $2.03, or $.0406.

COMPUTATION:

$$
\begin{array}{r}
.0406 \\
50\overline{)2.0300} \\
\underline{2\ 00} \\
300 \\
\underline{300}
\end{array}
$$

C41. REVIEW. Now let's review what we have learned in Sequence C about determining meal costs and pricing the menu. Complete the following blanks to the best of your ability. Review the text for any material you may be unsure of. Check your answers at the top of the next frame, as usual, and make any corrections necessary. Complete as many blanks as you can without aid.

C14. Mincemeat pie costs the open mess $.50 per pie, and if 1/6 of a pie is served to each person, then the portion cost will be 1/6 of $.50, or $.0833. Ice cream to go on the pie costs the open mess $1.15 per gallon, and if one scoop of ice cream is placed on each serving of pie, and if one scoop consists of 1/33 of a gallon of ice cream, then the portion cost per scoop of ice cream will be 1/33 of $1.15, or $.0349 (rounded off). We then total all portion costs to get $.5131 as the total food cost for the entire meal. We shall use this amount later to determine the price to charge for the meal.

C42. If you had a can of peaches containing 8 halves and costing $.48, how much would each half cost? _____. When costing the entire meal, how would you write the cost per half? _____. Costing the entire meal is the first step toward menu _____.

C15. The meat entree used in the sample meal in panel 11 was boned rolled roast turkey, which had no loss factor (no shrinkage or waste) because it was already cooked and boned, ready to serve. The cost per pound was $.40, which we used to determine the cost per person (portion cost). However, raw meat has a loss factor because it shrinks while being cooked and has some waste in processing due to bone and fat. To determine the cost per cooked portion (cost per person) of a meat bought in the raw state (with a loss factor), we use either a chart (see panel 12) or a formula (see panel 6, formula 2).

ANSWER: $.06; COMPUTATION:

$$
\begin{array}{r}
.06 \\
8\overline{).48} \\
\underline{48} \\
0
\end{array}
$$

written $.0600 when costing entire meal.

pricing.

C43. Formula No. 3 in panel 6 can be used for figuring the cost per cooked portion of meat that has _____.

Formula No. 2 is used for figuring the cost per cooked portion of meat that has _____.

C16. Let's try the chart first. The information at the top of panel 12 tells us to select the percentage of yield and the desired portion size of the meat on the chart and to multiply the figure that we find in the chart by the cost per raw-pound of meat to get the cost per cooked portion (cost per person). The example in panel 12 shows us that if beef ribs cost us 50 cents per raw pound, if they have a 40% yield, and if we want to serve a 6-ounce portion, we must multiply .937 (from the chart) by $.50 (cost per raw pound) to obtain the cost to the open mess per cooked portion. We will learn later how to price this portion on the menu based on its cost.

---

no loss factor

a loss factor

C44. Which formula would you use for figuring cost per cooked portion of pressed ham (no loss factor)? _____. Which formula would you use for beef pot roast? _____. Portion controlled meat costs the open mess $2.00 per pound. What is the cost to the open mess of a 10-ounce portion? _____.

C17. Let's try a problem now. Veal cutlets cost the open mess $1.35 per raw pound. We want to serve 6-ounce cutlets. Veal has a 65% yield. What is the cost per cooked portion? _____.

Formula No. 3.

Formula No. 2.

ANSWER: $1.25; COMPUTATION: (Formula 3)

$$\frac{2.00 \times 10}{16} = \frac{20.00}{16} = 16\overline{)20.00}$$

$1.25 cost per portion

16
40
32
80
80

OR

.125 per oz.
16)2.000
16
40
32
80
80

.125
x 10
$1.25 cost per portion

C45. See next frame.

ANSWER: $.78. COMPUTATION: 1.35 X .576 (from chart) = .7776 (rounded off--see panel 9)

C18. Now let's try Formula No. 2 (panel 6). What if your kitchen tests show a yield of a meat item of 61% or some other figure that is not a multiple of 5 and is not on the chart in panel 12? You would then use the formula. Turn to panel 6 and look at formula no. 2.

C45. Pineapple juice costs the open mess $.50 a quart (32 oz). Portion size of pineapple juice is 8 ounces. How much is the cost per person (portion cost)? _____.

C19. Formula No. 2 tells us to multiply the price per raw pound by the desired portion size, and to divide the result by the percentage of yield of the meat item multiplied by 16 ounces. The example under Formula No. 2 shows that chicken costing $.90 per raw pound and having a 60% yield will cost the open mess $.75 for an 8-ounce cooked portion, using Formula 2 for computations. This problem could also be worked by using the chart in panel 12 and multiplying $.90 by .833 from the chart. Formula No. 2 can be used for costing any item having a loss factor that is sold in pounds and ounces (dry weight).

ANSWER: $.125; COMPUTATION:

$$\frac{4}{8)32} \quad ; \quad \frac{\$.125}{4).50}$$

$$\begin{array}{r} 4 \\ \hline 10 \\ 8 \\ \hline 20 \end{array}$$

OR

$$\begin{array}{r} .0156 \text{ per oz.} \\ \hline 32).5000 \\ 32 \\ \hline 180 \\ 160 \\ \hline 200 \\ 192 \\ \hline 8 \end{array}$$

$$\begin{array}{r} .0156 \\ \times \quad 8 \text{ oz.} \\ \hline \$.1248 \end{array} \text{ or } .125 \text{ (rounded off)}$$

C46. See next frame.

C20. Let's try a problem now that would not allow us to use the chart, but that would be suited to Formula No. 2 in panel 6. Lamb stew meat costs you $.85 per raw pound. You want to serve a 15-ounce cooked portion. Assume that lamb stew meat has a 78% yield. What is your cost per cooked portion? _____.

C46. Formulas 2 and 3 were not used to figure the portion cost of pineapple juice, as they are used for figuring cooked portion costs. Let's try another problem. Boneless round beef costs the open mess $1.40 per raw pound. We want to serve 8-ounce portions. Boneless round beef has a 60% yield. What is the cost per cooked portion? _____.

ANSWER: $1.02; COMPUTATION: $\frac{.85 \times 15}{.78 \times 16} \div \frac{12.75}{12.48} \div 12.48.)\overline{12.75.00}$ 1.02

C21. We have already learned how to use Formula No. 3 in panel 6 to figure the cost per cooked portion of the boned, rolled roast turkey, with no loss factor, in panel 11 (costing the entire meal). Formula No. 3 tells us to multiply the price per pound of cooked turkey ($.40, panel 11) by the portion size (8 ounces) and to divide the result by 16 ounces to get the cost per cooked portion of the boned, rolled roast turkey ($.2000). Panel 9 tells us to carry the portion cost to <u>three</u> places beyond the decimal, rounded off, except that when costing an entire meal it will be carried to <u>four</u> places.

ANSWER: $1.1662;

COMPUTATION: $1.40 x .833 (from chart, panel 12) = $1.1662

C47. Short ribs cost you $.95 a pound raw. You want to serve a 13-ounce portion. Short ribs have a 61% yield. What is your cost per cooked portion? _____.

C22. A chart (panel 13) can be used in some cases to determine the portion cost of portion cut meats (with no loss factor) when the cost per pound and the portion size are known. However, the portion cost shown on the chart is carried only two places beyond the decimal, except for 1-ounce portions. Turn to panels 13 and 13.1. You can see that by using the chart in panel 13 you can find that a portion cut meat costing $1.05 a pound will cost you $.39 for a 6-ounce portion. What would a meat costing $1.65 a pound cost you for a 10-ounce portion? _____.

ANSWER: $1.2654

COMPUTATION: (Formula 2) $\frac{.95X13}{.61X16} = \frac{12.35}{9.76} = 1.26536$ or 1.2654 (rounded off)

C48. You are costing the menu for a meal in the open mess, and the main entree (meat) consists of several ingredients. In figuring the cost to the open mess of the meat entree it is necessary to _____ each ingredient in the recipe for the entree. You then divide the total cost of the recipe for the entree by the number of _____ to get the cost per _____.

ANSWER: $1.03. (Panel 13, under heading $1.30 to $2.00 Per Pound, 10-ounce line, under "$1.65")

C23. Using Formula No. 3 from panel 6, the answer becomes $1.0313.

COMPUTATION: $\frac{1.65 \times 10}{16} = \frac{1.0313}{16)16.5000}$

This answer would be necessary for costing the entire meal (panel 11), because it is carried to four places beyond the decimal. Formula No. 3 can be used for costing any item having no loss factor that is sold in pounds and ounces (dry weight).

---

cost

portions

portion

C49. After you have costed the entire meal you can determine how much to charge for the meal by dividing the _____ into the _____.

C24. So far in costing the menu we have been concerned with single items; that is, items having only one ingredient. Sometimes we will have to cost an item consisting of many ingredients, such as meat loaf. In figuring the cost to the open mess of a 4-ounce portion of meat loaf, we must cost each ingredient in the recipe for meat loaf, as we did in panel 3 for wheat griddle cakes. That is the purpose of the recipe food cost card (panel 3). The total cost of the recipe is divided by the number of portions served or yielded from the recipe to determine the portion cost. In panel 3 we divided 75 portions into $4.7716 to get $.064 as the cost per portion of the wheat griddle cakes.

---

food cost percentage

total food cost

C50. You can also use a menu pricing guide to price your menu. You get from the menu pricing guide a _____ which you multiply by the _____ to obtain the menu selling price.

C25. You would figure the portion cost of meat loaf the same way. If a recipe for meat loaf yields 240 ounces, and you desire to serve 4-ounce portions, then 240 divided by 4 gives you 60 portions to serve. Divide the 60 portions into the cost of the ingredients ($6.00) and you get $.10 as the portion cost.

COMPUTATION:

Recipe Yield: 240 ounces Cost of Ingredients: $6.00

Portion Size: 4 ounces 60 portions (4)240 $.10 cost per portion (60)6.00

---

factor

total food cost for the menu

C51. Gross profit is the profit you make over and above the cost of the _____ only. Net profit is the amount you actually make over and above the cost of _____, _____, and _____, including _____ _____.

C26. After you have costed your entire meal and gotten a total food cost for the meal ($.5131 in panel 11) you can determine how much to charge for the entire meal (price the menu). This is easily done by dividing the food cost percentage into the total food cost. Look at formula 4 in panel 6. We have already used this formula for determining the portion selling price of an item. It can also be used for determining the menu selling price. How much would the meal in panel 11 sell for if the food cost percentage of the open mess were 40%? _____.

---

food

food, overhead, labor costs, employee meals

C52. If you collect $300 for a banquet and your food cost for the banquet is $100, what will be your gross profit in dollars? _____.

What will be your food cost percentage? _____.

What will be your gross profit percentage? _____.

ANSWER: $1.28; COMPUTATION: $\begin{array}{r} 1.28 \\ 40.\overline{)51.31} \end{array}$

C27. There is another way to figure your menu selling price for a meal. Turn to panel 14. This is a menu pricing guide and it is very simple to use. If your total food cost for your menu (panel 11) is $.5131 and your food cost percentage is 40%, multiply $.5131 by 2.5 (the factor beside 40% food cost in the menu pricing guide in panel 14) and you will get the menu selling price of _____.

$200; COMPUTATION: $300 - $100 = $200

33⅓%; COMPUTATION: $\begin{array}{r} .33\frac{1}{3} \\ 300.\overline{)100.000} \end{array}$

67%; COMPUTATION: $\begin{array}{r} .666 \text{ or } .67 \\ 300\overline{)200.00} \end{array}$ or 100% - 33% = 67%

C53. If your overhead and labor are $150, what percentage is this of the amount collected? _____. What will be your net profit in dollars and percentage? _____ (dollars); _____ (percentage).

ANSWER: $1.28. COMPUTATION: .5131
x 2.5
1.28

C28. This menu pricing guide will work for portion selling prices as well as menu selling prices. Suppose you were operating an open mess on a 40% food cost percentage and a 6-ounce serving of prime rib roast cost you $.23. What would be your menu selling price for this item? _____

_____.

50%; COMPUTATION: .50
300.)150.00

$50; COMPUTATION: $200. - $150. = $50.

17%; COMPUTATION: .166 or .17
300.)50.00 or 33% / 50% = 83%; 100% - 83% = 17%

C54. Your banquet profit statement will look like this:

$300.00	collected =	100%
-100.00	food cost =	-33% food cost %
200.00	gross profit =	67% gross profit %
-150.00	overhead & labor =	50% of amount collected
50.00	net profit =	17% net profit%

ANSWER: $.58; COMPUTATION: .23 x 2.5 = .575 = .58

C29. What gross profit percentage would you be making on this item? _____.

PLEASE RETURN TO PAGE 1 AND CONTINUE WITH FRAME 30.

C55. This completes Sequence C

40

161 PT

SEQUENCE D

FOR PROGRAMED INSTRUCTION ON

OPEN MESS FOOD COST CONTROL

Subject:

DETERMINATION OF FOOD COST PERCENTAGES

New X
Revised
Reprint
Reviewed by
Approved by SSPSD Jan 70

U.S. ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA

SUPPLY TRAINING CENTER OF THE ARMY SCHOOL SYSTEM

SEPTEMBER 1970

This volume supersedes 161 PT, dtd February 1970.

Army-Fort Lee, Va.-14852-73-300-4

OPEN MESS FOOD COST CONTROL

SEQUENCE D OBJECTIVES

Determination of Food Cost Percentages

After completing this sequence of instruction, you will be able to determine food cost percentages for a single item and for a meal. You will also be able to determine food cost percentages for the open mess for a day, and accumulated food cost percentages for a week, a month, or a year.

D1. In Sequence B of this course we learned the importance in food cost control of proper purchasing, receiving, storing, issuing, production, inventory, and sales. These food cost controls play a vital part in staying within the gross profit percentage objective set by CONARC and in keeping the food cost percentage down (the higher the food cost percentage, the lower will be the gross profit percentage to the open mess).

D11. Going on to formula No. 8, we find that we can divide our sales receipts for that day ($400.00) into the cost of goods sold ($180.00) to get the food cost percentage for the day (45%). We learned in Sequence C to get the food cost percentage for a banquet by dividing the amount collected for the banquet into the food cost. This was one use of formula No. 8.

D2. We learned in Sequence A to use formula No. 5 (panel 6) to determine the food cost percentage when our gross profit objective was known. For example, a gross profit objective of 60% deducted from 100% would leave us a food cost percentage of 40%. We also learned that CONARC sets the gross profit objective for the open mess, which is the amount you must clear over and above the actual cost of the food (Sequence C). You must try to stay within your food cost percentage and periodically determine whether you are doing so for a particular day, week, month, or year and for a single food item, an entire meal, or a banquet.

D12. Let's try a problem now. You want to figure your food cost percentage for a <u>day</u>. Your opening inventory was $100.00 and during the day you received $150.00 in food items. At the end of the day your closing inventory was $40.00. Your sales receipts for the day amounted to $400.00. What was your food cost percentage for the day? _____.

D3. The food cost percentage is a very important management tool when readily available, as it tells you how your open mess food operation is running profit-wise. CONARC gives you the desired food cost percentage, and you can determine your actual food cost percentage by using formulas. A food cost control system is the only way to accurately evaluate the efficiency of the food department and to point out operating deficiencies that increase food cost or decrease profit.

ANSWER: 53% COMPUTATION:

100.00
+ 150.00
250.00
- 40.00
210.00 cost of goods sold

.525 or .53 (rounded off)
400)210.00

D13. You can also figure your accumulated food cost percentage for a week, a month, or a year. This is another use of formula No. 8. Look at the following situation:

Date	Cost of Goods Sold	Sales Receipts	Food Cost %
1 February	$400	$900	44%
2 February	$500	$1,250	40%
Total to Date	$900	$2,150	

What is the accumulated food cost percentage through 2 February? Divide $2,150 into $900:

.419 or 42%
2150.)900.0000

D4. Turn to panel 6 and look at formula No. 5. We learned in Sequence A to use this formula to figure the food cost percentage when the gross profit percentage was known. Now look at formula No. 6, Panel 6.1. This is another formula for figuring your food cost percentage for a single item or a complete meal. Formula No. 6 says to divide the menu selling price into the cost of the item to determine the food cost percentage. The example under formula No. 6 shows that a salad costing you $.30 and selling for $.45 is giving you a food cost percentage of 66%. How much is your gross profit percentage?

_____.

D14. Formula No. 8 can be used to determine the accumulated food cost percentage of the open mess up through the end of a week, a month, or a year by dividing the accumulated cost of goods sold for the period by the accumulated sales receipts for the period.

ANSWER: 34%; COMPUTATION: 100% - 66% = 34%.

D5. If CONARC sets the gross profit percentage at 50%, would you be making too much or not enough on the salad? _____.

D15. Let's try a problem now in determining accumulated food cost percentages:

Date	Cost of Goods Sold	Sales Receipts	Food Cost %
1 March	$420	$800	53%
2 March	$200	$500	40%
3 March	$400	$680	59%

1. What is the accumulated food cost percentage through 2 March?

_____.

2. What is the accumulated food cost percentage through 3 March?

_____.

ANSWER: not enough. COMPUTATION: 50% - 34% = 16% under

D6. Formula No. 6 can be used for an entire meal to determine the food cost percentage. In Sequence C we costed an entire meal (panel 16) and found that it cost us $1.1820. Using a 60% gross profit objective (40% food cost percentage), we priced the meal at $2.95 by dividing 40% into $1.1819 (formula 4). We can now use formula No. 6 to see if our price of $2.95 is within the 40% desired food cost percentage. We divide $2.95 <u>into</u> $1.1819 and get 40%, so we know our price is right.

ANSWERS: 1. 48%; COMPUTATION: $1300.\overline{)620.000}$ (.476 or 48%)

2. 52%; COMPUTATION: $1980.\overline{)1020.000}$ (.515 or 52%)

D16. This accumulated food cost percentage record enables us to see if our food operation is running within the gross profit objective percentage and food cost percentage set by the board of governors. At the end of the month, our opening inventory at the beginning of the month plus the amount of food received from the storeroom (total of issue slips) during the month should equal our accumulated cost of goods sold plus our closing physical (counted) inventory. A discrepancy of more than 5% should be investigated.

D7. Let's try a problem now. Your cost control sheet for a table d'hote meal showed that the meal cost your open mess $1.15. You are selling the meal for $2.90. What is your food cost percentage for the meal? _____.

D17. For example, look at the following situation:

	$300.00	on hand at beginning of month
+	1,500.00	received from storeroom during month
	1,800.00	goods available to sell during month
-	1,400.00	accumulated cost of goods sold during month
	400.00	goods on hand at end of month (book inventory)
-	100.00	actual goods on hand at end of month (physical inventory)
	300.00	discrepancy (17% of $1800)

Our physical, counted inventory at the end of the month discloses that we have only $100.00 worth of food items on hand in the kitchen rather than the $400.00 worth that our book inventory says we are supposed to have on hand. There is a discrepancy of $300.00, and the matter should be investigated as it exceeds the 5% limitation. There may be excess pilferage taking place.

ANSWER: 40%; COMPUTATION: $290.\overline{)115.000}$ .396 = 40% (rounded off)

D8. Formulas No. 4 and 6 tell us that we can get the portion selling price of an item by dividing the food cost percentage set for the open mess into the cost of the item, and that we can check our selling price to see if it is within our food cost percentage by dividing our selling price into the cost of the item. Formula No. 6, then, becomes a checking device for Formula No. 4.

D18. At the beginning of the month you had an opening inventory of $500.00. During the month you received $1,000.00 worth of food items from the storeroom and signed the issue slips for them. Your accumulated cost of goods sold amounted to $1,400.00 for the month. You conducted a physical count of goods on hand at the end of the month in the kitchen and found that you had $30.00 worth of goods on hand. 1. What was your discrepancy in dollars between your book inventory and physical inventory at the end of the month? _____. 2. Would you investigate it? _____. Why? _____

_____.

D9. Sometimes it is necessary to determine the food cost percentage for an entire day's operations. This can be done by taking an inventory at the start of the day of all food items on hand in the open mess by monetary value, adding to it all food items issued during the day to the open mess by monetary value, and subtracting the monetary value of the closing inventory at the end of the day to give you the cost of the goods sold during the day. You then divide the cost of goods sold during the day by the sales receipts for the day. This will give you the food cost percentage for the entire day.

---

1. ANSWER: $70.00; COMPUTATION:

500.00	on hand
+ 1000.00	received
1500.00	
- 1400.00	cost of goods sold
100.00	(book inventory)
- 30.00	(physical inventory)
70.00	discrepancy (4.7% of $1500)

2. ANSWER: No.

3. Because $70.00 does not exceed 5% of $1500; COMPUTATION:

$$\begin{array}{r} \$1500. \\ \times\ 05. \\ \hline \$75.00 \end{array} \qquad \begin{array}{r} .0466 \text{ or } 4.7\% \\ 1500.\overline{)70.0000} \end{array}$$

D19. See next frame.

D10. Look at formulas No. 7 and 8 in panel 6.1. Formula No. 7 shows that on 2 May the opening kitchen inventory was $80.00, and that during the day $130.00 worth of food items were issued to the open mess kitchen. This $130.00 added to the $80.00 gave us a total of $210.00. However, at the end of the day only $30.00 worth of food items were left in the kitchen. Subtracting this amount from $210.00 gave us $180.00 as the cost of the goods we sold that day. We have to know this in order to figure our food cost percentage for that day.

PLEASE RETURN TO PAGE 1 AND CONTINUE WITH FRAME 11.

D19. REVIEW. Let's review the entire course now by working some problems. Turn to panel 17 and answer the questions. Use panel 6 for formulas and any other panels you might need. Working these problems will give you a good review of the course. Check your answers with panel 17.1 after you have worked the problems and correct any errors you made. When you have completed panel 17 you will have completed Sequence D.

END OF SEQUENCE D

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161 PB

PANEL BOOK

FOR PROGRAMED INSTRUCTION ON

OPEN MESS
FOOD COST CONTROL

U.S. ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA

SUPPLY TRAINING CENTER OF THE ARMY SCHOOL SYSTEM

SEPTEMBER 1970

This volume supersedes 161 PB, dtd February 1970.

Army-Fort Lee, Va.-8864-70-2M—4

PLAN FOR A SELECTIVE MENU

Two soups, two fruit cocktails, tomato or mixed vegetable juice.

Entrees to include three meat dishes (one expensive, one medium priced, and one inexpensive), one fish or pountry entree, one meatless plate, and one cold entree.

Two kinds of potatoes and three other vegetables.

Fruit or vegetable salads.

One gelatin, one pudding, one cake, three kinds of ice cream, three kinds of pie or pastry, fruit cup of some kind, fresh fruit or berries in season, or cheese and crackers.

STUDENT NOTE: Complete instructions for completing the scatter sheet can be found in USCONARC Pamphlet No. 230-1.

SCATTER SHEET

SALES PRICE	MENU ITEM	TIMES SOLD	TOTAL	SALES VALUE
	25% Cost			
$ .25	Hamburger		26	$ 6.50
.20	Cheese Sandwich		6	1.20
.30	Egg Salad Sandwich		10	3.00
.20	Jello Salad		5	1.00
	30% Cost			
.25	Pie, Cherry and Apple		13	3.25
.20	Ice Cream		15	3.00
.35	Cheeseburger		30	10.50
.40	Ham Sandwich		15	6.00
.30	Waldorf Salad		12	3.60
2.00	Baked Ham Dinner		25	50.00
1.75	Fried Chicken Dinner		20	35.00
	35% Cost			
.55	Pork Sandwich, Hot		10	5.50
.55	Beef Sandwich, Hot		20	11.00
.90	Shrimp Salad		30	27.00
1.75	Turkey Dinner		25	43.75
1.50	Pork Chop Dinner		5	7.50
.35	Ice Cream, Sundae		25	8.75
	40% Cost			
1.00	Lobster Cocktail		20	20.00
.80	Club Sandwich		35	28.00
1.50	Pork Tenderloin Dinner		12	18.00
2.40	Filet Mignon Dinner		25	60.00
.40	French Pastry		15	6.00
	45% Cost			
1.00	Oyster Cocktail		20	20.00
1.25	Fruit Salad Plate		23	28.75
1.80	Rib Steak Dinner		10	18.00
2.75	Rainbow Trout Dinner		31	85.25
2.50	Prime Rib Dinner		7	17.50
.10	Coffee		46	4.60
.10	Milk		35	3.50
	50% Cost			
.40	Asparagus Tip Salad		30	12.00
1.00	Prime Rib Sandwich		19	19.00
3.50	T-Bone Steak, 16 oz		35	122.50
3.25	New York Cut Steak, 12 oz		17	55.25
.45	Strawberry Shortcake		35	15.75
	55% Cost			
.35	Chef's Salad Bowl		25	8.75
1.25	Calf's Liver Dinner		26	32.50
2.50	Lobster Tails		7	17.50
			TOTAL	$819.40

SAMPLE

USCONARC Form 259-R

Panel 2

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SCATTER SHEET RECAP							
Items	25% Cost	30% Cost	35% Cost	40% Cost	45% Cost	50% Cost	55% Cost
Cost	.004	.041	.044	.064	.097	.137	.039 - .426
Of Food Cost	1%	11%	11%	15%	23%	30%	9% - 100%

REMARKS AND RECOMMENDATIONS:

SAMPLE

USCONARC FORM Jan 67 260-R

Panel 2.1

FORECASTING SALES SHEET

Friday Luncheon - 11 May 19--

Estimated Orders To Be Sold	Amount Raw Food Needed	Amount on Hand	ENTREES	Amount of Food Prepared	Number of Orders Sold	Number of Orders Eaten by Employees	Amount of Leftovers	Special Conditions
			Chow Mein with Toasted Almonds					
20	6 1/4 lb.	2 lb.	French Fried Shrimp	6 1/4 lb.	16	2	10 oz.	
50	18 lb.	0	Roast Leg of Veal (Boneless)	18 lb.	43	7	-	
			Luncheon Tenderloin Steak					
			Ground Choice Beefsteak					
			Tropical Fruit Cup					
			Seafood Cocktail					
			Chilled Orange Juice					
			Cold Fruit Plate					
			Apple Pie					
			Nesselrode Cake					

Panel 2.2

RECIPE FOOD COST CARD

RECIPE FOR WHEAT GRIDDLE CAKES

DATE -- July 19-- FOR 75 PORTIONS

Ingredients	Quantity	Unit	Unit Cost	Amount
Flour, sifted	11-1/4	Lbs.	.10	1.1250
Sugar, granulated	1-1/8	Lbs.	.08	.0900
Baking powder	12-3/4	Oz.	.01	.1275
Salt	3-3/4	Oz.	.01	.0375
Milk	2-1/3	Gal.	.65	1.5166
Eggs, well beaten	3-1/6	Doz.	.45	1.4250
Shortening, melted	1-1/2	Lbs.	.30	.4500
COMBINED INGREDIENT COST				$4.7716

YIELD		Portion Size	Portions Yielded	Portion Cost	Portion Selling Price	Food Cost %	Anticipated Gross Profit %
Quantity	Unit						
300	Cake	4 cakes	75	$.064	$.16	40%	60%

Steps in Preparation

4 Tbsp batter per cake

	High	Medium	Low
POPULARITY	X		

PANEL 3

RECIPE FOOD COST CARD

RECIPE FOR CREAM OF ONION SOUP

DATE -- July 19-- FOR 75 PORTIONS

Ingredients	Quantity	Unit	Unit Cost	Amount
Onions	5-1/4	Lbs.	.04	
Water, boiling	6	Qts.	---	---
Beef stock	2-1/8	Gal.	.35	.7437
Milk	1	Gal.	.65	
Salt	4	Oz.	.01	
Carrots, chopped fine	3/4	Lbs.	.04	
Fat, melted	3/4	Lbs.	.30	
Flour	3/4	Lbs.	.10	
COMBINED INGREDIENT COST				1.9737

YIELD		Portion Size	Portions Yielded	Portion Cost	Portion Selling Price	Food Cost %	Anticipated Gross Profit %
Quantity	Unit						
75	cup	1 cup	75				55%

Steps in Preparation

	High	Medium	Low
POPULARITY	X		

PANEL 3.1

SINGLE ITEM FOOD COST CARD

FOOD ITEM: Lettuce

Date	Buying Package	Buying Package Cost	Units in Buying Package		Units Per Portion (Portion Size)	Portion Cost	Portion Selling Price	Anticipated Gross Profit %
			Quantity	Unit Cost				
5 Oct 19--	Crt.	$2.50	24 hd.	.10	1/8	.013	.03	55%
8 Jan 19--	Crt.	$3.60	24 hd.	.15	1/8	.019	.04	55%

PANEL 4

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SINGLE ITEM FOOD COST CARD

FOOD ITEM: Ground Beef

Date	Buying Package	Buying Package Cost	Units in Buying Package		Units Per Portion (Portion Size)	Portion Cost	Portion Selling Price	Anticipated Gross Profit %
			Quantity	Unit Cost				
10 May 19--	Lbs.	.40	16 oz.	.025	5 oz.			55%
1 Aug 19--	Lbs.	.54	16 oz.	.034	5 oz.			55%

PANEL 4.1

MARK-UP TABLE

PORTION COST

%	.02	.04	.06	.08	.10	.12	.14	.16	.18	.20	.22	.24	.26	.28	.30	.32	.34	.36	.38	.40	.42	.44	.46	.48	.50	.52	.54	.56	.58	.60	.62	.64	.66	.68	.70	.75	.80	.85	.90	.95	1.00
25	08	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	280	300	320	340	360	380	400
30	07	13	20	27	33	40	47	53	60	67	73	80	87	93	100	107	131	120	127	133	140	145	153	160	167	173	180	186	193	200	206	213	220	226	233	250	266	283	300	317	333
32	06	13	19	25	31	36	44	50	56	63	69	75	81	88	94	100	106	118	119	125	131	138	144	150	156	163	169	175	181	188	194	200	206	213	219	234	250	266	281	297	313
34	06	12	18	24	29	35	41	47	53	59	65	71	76	82	88	94	100	106	112	118	123	129	135	141	147	153	159	165	171	176	182	188	194	200	206	221	235	250	265	279	294
36	06	11	17	22	28	33	39	44	50	56	61	67	72	78	83	89	95	100	106	111	117	122	128	133	139	144	150	156	161	167	172	178	183	189	194	208	222	236	250	264	278
38	05	11	16	21	26	32	37	42	47	53	58	63	68	74	79	84	90	95	100	105	111	116	121	126	132	137	142	147	153	158	163	168	174	179	184	197	210	224	237	250	263
40	05	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	188	200	213	225	238	250
42	05	10	14	19	24	29	33	38	43	48	52	57	62	67	71	76	81	86	90	95	100	105	109	114	119	124	128	132	137	143	148	152	157	162	166	179	190	202	214	226	238
44	05	09	14	18	23	27	32	36	41	46	50	55	59	64	68	73	77	82	86	91	96	100	105	109	114	118	123	127	132	136	141	145	150	155	159	170	182	193	205	216	227
46	04	09	13	17	22	26	30	35	39	44	48	52	57	61	65	70	74	78	83	87	91	96	100	104	109	113	117	122	126	130	135	139	143	148	152	163	174	185	198	207	217
48	04	08	13	17	21	25	29	33	38	42	46	50	54	58	63	67	71	75	79	83	87	92	96	100	104	108	112	117	121	125	129	133	137	142	146	156	167	177	187	198	208
50	04	08	12	16	20	24	28	32	36	40	44	48	52	56	60	64	68	72	76	80	84	88	92	96	100	104	108	112	116	120	124	128	132	136	140	150	160	170	180	190	200
52	04	08	12	15	19	23	27	31	35	38	42	46	50	54	58	62	65	69	73	77	81	85	88	92	96	100	104	108	111	115	119	123	127	131	135	144	154	163	173	183	192
54	04	07	11	15	19	22	26	30	33	37	41	44	48	52	56	59	63	67	70	74	78	82	85	89	93	96	100	104	107	111	115	119	122	126	130	139	148	157	167	176	185
56	04	07	11	14	18	21	25	29	32	36	39	43	46	50	54	57	61	64	68	71	75	79	82	86	89	93	96	100	104	107	111	114	118	121	125	134	143	152	161	170	179
58	04	07	10	14	17	21	24	28	31	35	38	41	45	48	52	55	59	62	66	69	72	76	79	83	86	90	93	97	100	103	107	110	114	117	121	129	138	147	155	164	172
60	03	07	10	13	17	20	23	27	30	33	37	40	43	47	50	53	57	60	64	67	68	74	77	80	84	87	90	94	97	100	104	107	110	114	117	125	134	142	150	158	167

FOOD COST PERCENTAGE

SALES PRICE

Sale Price is found by determining Portion Cost and Food Cost percentage desired. Where these lines cross is the price that must be charged.

Panel 5

FORMULAS AND EXAMPLES

1. $\frac{\text{Number of persons to serve} \times \text{desired portion size}}{\text{percentage of yield} \times 16 \text{ oz}}$ = Number of pounds to purchase

Example: You want to serve 200 persons a 6 oz. portion of steak. You know that steak has an 80% yield. How many pounds would you purchase?

$\frac{200 \times 6 \text{ oz.}}{.80 \times 16 \text{ oz.}} = \frac{1200}{12.80} =$ $12.80\overset{\curvearrowright}{.}/\overline{1200.\overset{\curvearrowright}{00}.}$ $\quad 93.7$ or 94

2. $\frac{\text{Price per raw lb} \times \text{desired portion size}}{\text{percentage of yield} \times 16 \text{ oz.}}$ = cost per cooked portion (item with loss factor)

Example: You know that chicken costs you 90¢ a lb and you want to serve an 8 oz. portion. Chicken has a 60% yield. What is your cost per cooked portion?

$\frac{.90 \times 8 \text{ oz.}}{.60 \times 16 \text{ oz.}} = \frac{7.20}{9.60} =$ $9.60\overset{\curvearrowright}{.}/\overline{7.\overset{\curvearrowright}{20}.}$ $\quad .75$

3. $\frac{\text{Price per lb} \times \text{portion size}}{16 \text{ oz.}}$ = cost per cooked portion (item with no loss factor)

Example: You are paying $1.20 a lb (16 oz) for boneless cooked turkey roll. You want to serve a 10-oz. portion. What does this portion cost you?

a. $1.20 \times 10 = 12.00$

b. $16/\overline{12.0000}$ $\quad .7500$

4. $\frac{\text{Cost of item (or menu)}}{\text{Food Cost percentage}}$ = Portion (or menu) selling price.

Example: You know the peas cost you $.064 a portion. If you are using a 40% food cost percentage, what is your portion selling price?

$\frac{.064}{.40} =$ $.40\overset{\curvearrowright}{.}/\overline{.06\overset{\curvearrowright}{.}40}$ $\quad .16$

5. 100 percent - gross profit = food cost percentage.

Example: You are generating a 55 percent gross profit in your kitchen. What is your food cost percentage?

$100 - 55 = 45\%$

6. $\frac{\text{Cost of item}}{\text{Menu selling price}}$ = Food cost percentage

Example: A salad costs you 30¢ and you are selling it for 45¢. What is the food cost percentage for this item?

$\frac{.30}{.45} = .45\overline{).30,00}$ → 0.66

7. Opening inventory + issues to kitchen - closing inventory = cost of goods sold

Example: 0100 hours on 2 May, your kitchen inventory reveals $80 worth of foodstuff. During the day, 2 May, the kitchen is issued $130 worth of food. At the end of the day your kitchen closing inventory reveals you have $30 left. What was the cost of goods sold (kitchen) for 2 May?

Opening inventory	$80.00
Issues to kitchen	130.00
Total	$210.00
Closing Inventory	- 30.00
	$180.00 (cost of goods sold)

8. $\frac{\text{Cost of goods sold}}{\text{Sales receipts}}$ = Food cost percentage for a day or meal

Example: On 2 May your cost of goods sold was $180. Your sales receipts for the same day were $400. What was your food cost percentage for 2 May?

$\frac{180.}{400.} = .45$

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RECIPE FOOD COST CARD

RECIPE FOR CREAM OF ONION SOUP

DATE -- July 19-- FOR 75 PORTIONS

Ingredients	Quantity	Unit	Unit Cost	Amount
Onions	5-1/4	Lbs.	.04	.2100
Water, boiling	6	Qts.	--	----
Beef stock	2-1/8	Gal.	.35	.7437
Milk	1	Gal.	.65	.6500
Salt	4	Oz.	.01	.0400
Carrots, chopped fine	3/4	Lbs.	.04	.0300
Fat, melted	3/4	Lbs.	.30	.2250
Flour	3/4	Lbs.	.10	.0750
COMBINED INGREDIENT COST				1.9737

YIELD		Portion Size	Portions Yielded	Portion Cost	Portion Selling Price	Food Cost %	Anticipated Gross Profit %
Quantity	Unit						
75	cup	1 cup	75	.026	.06	45%	55%

Steps in Preparation

	High	Medium	Low
POPULARITY	X		

PANEL 7

SINGLE ITEM FOOD COST CARD

FOOD ITEM: Ground Beef

Date	Buying Package	Buying Package Cost	Units in Buying Package		Units Per Portion	Portion Cost	Portion Selling Price	Anticipated Gross Profit %
			Quantity	Unit Cost				
10 May 19--	Lb	.40	16 oz.	.025	5 oz.	.125	.28	55%
1 Aug 19--	Lb	.54	16 oz.	.034	5 oz.	.170	.38	55%

PANEL 8

ITEM	NO. PLACES TO CARRY BEYOND DECIMAL
Combined Ingredient Cost	4 rounded off*
Portion cost	3 " "
(when costing entire meal)	4 " "
Unit cost	2 " "
Portion selling price	2 " "
Number of pounds to purchase	2 " "
Percentage of yield	2 " "
Food cost percentage	2 " "
Net and gross profit percentage	2 " "

*Rule for rounding off: A fraction of a cent less than 5 mills is disregarded, and each fraction of 5 mills or more is computed as a whole cent. For example, $.156 would be rounded off to $.16, as the 6 is a fraction of a cent more than 5 mills. $.154 would be rounded off to $.15, as the 4 is a fraction of a cent less than 5 mills, and it is disregarded.

MEAT YIELD CHART

All the yields are based on many hundreds of tests and are general averages. They allow for waste in trimming the meat, cooking, shrinkage, and small-end waste. Determination of exact shrink for each meat item which is cooked is advisable.

BEEF	Net Servable Cooked Yield
Roast Sirloin (boneless)	70%
Pot Roast	60%
Chopped Beef	75%
Short Ribs (bone in)	60%
Corned Beef (Brisket)	60%
Beef Liver	75-90%
Stew (boneless)	75%
Swiss Steak	70%
Tenderloin Steak	90%
Sirloin Steak (bnls. strip)	75%
Sirloin Steak (bone-in strip)	80%
Minute Steak (bnls. butt)	80%
Boneless Top and Bottom Round Roast	70%
Knuckle Butt Roast	65%
Shoulder Clod Roast	70%
Oven-prepared Beef Rib	50%

BEEF (*Continued*)	Net Servable Cooked Yield
Chef's Delight Beef Rib	60%
Boneless Round	60%
Fresh Bone-in Beef Brisket	45%
Hotel Special Rib Steak Roll	75%
Beef Round R&S Off	50%
LAMB	
Roast Leg	45%
Roast Loin	40%
Lamb Stew (boneless)	75%
VEAL	
Veal Cutlet (boneless)	80%
Calf's Liver	75%
Roast Leg	50%

VEAL (*Continued*)	Net Servable Cooked Yield
Roast Loin	50%
Veal Loin Chop (bone-in)	75%
Veal Rib Chop (bone-in)	75%
PORK	
Breaded Tenderloin	100%
Sausage Patties	55%
Breaded Pork Chop (bnls.)	90%
Pork Chops (bone in)	80%
Spareribs	65%
Roast Pork Loin	50%
Ham Steak (bone in)	80%
Baked Ham (bone in)	65%
Roast Fresh Ham	50%
POULTRY	
Fried Chicken, 2 lbs.	100%
Turkey, 18 lbs./up	40%

Panel 10

COST CONTROL SHEET
(FOR ENTIRE MEAL)

Food Item	Size of Portion Served	Total Amt to Purchase per Portion	Unit of Purchase	Cost per Unit	Portion Cost (Cost per Person)
DINNER					
Chilled tomato juice	3 oz.	3 oz.	qt. (32 oz)	$.21	$.0198
Roast Turkey (boned, rolled)	8 oz.	8 oz.	lb. (16 oz)	.40	.2000
Fresh asparagus spears	3 oz	1/7 bunch (3 oz.)	bunch (21 oz)	.35	.0500
Baked potato	4 oz.	4 oz.	lb. (16 oz)	.06	.0150
Lettuce wedges	1/5 head	1/5 head	head	.10	.0200
French dressing	1 oz.	1 oz.	gal. (128 oz)	2.50	.0195
Hot rolls	2 ea.	2 ea.	doz.	.18	.0300
Beverage (coffee)	1 cup	1/50 can	2-lb can	2.03	.0406
Mincemeat Pie (a la mode)	1/6 pie	1/6 pie	pie	.50	.0833
Ice cream	1 #16 scoop	1/33 gal.	gal.	1.15	.0349
			TOTAL FOOD COST		$.5131

MEAT PORTION COST FINDER FOR WHOLESALE CUTS (LOSS FACTOR)

Select the percentage of yield and the desired portion size from the chart below. Multiply the figure that you find by your cost per raw pound and this will give you the cost per cooked portion serving.

EXAMPLE: Beef ribs cost 50 cents per pound. We find they have a 40% yield. We want to serve a 6-oz. cooked portion. Therefore, our multiplier is .937.

.937
x .50

.46850 or 47 cents per cooked portion.

PERCENTAGE OF YIELD

Portion Size	*30%*	*35%*	*40%*	*45%*	*50%*	*55%*	*60%*	*65%*	*70%*	*75%*	*80%*	*85%*	*90%*	*95%*	*Portion Size*
2 oz.	.416	.355	.312	.277	.25	.227	.208	.192	.178	.166	.156	.147	.138	.132	2 oz.
3 oz.	.625	.535	.468	.416	.375	.340	.312	.288	.267	.25	.234	.22	.208	.197	3 oz.
4 oz.	.833	.714	.625	.555	.50	.454	.416	.375	.357	.333	.312	.294	.277	.263	4 oz.
5 oz.	1.04	.893	.796	.694	.625	.568	.52	.48	.416	.416	.39	.367	.347	.329	5 oz.
6 oz.	1.25	1.07	.937	.833	.75	.681	.625	.576	.535	.5	.468	.441	.416	.394	6 oz.
7 oz.	1.46	1.25	1.09	.972	.875	.795	.723	.673	.625	.583	.547	.514	.486	.460	7 oz.
8 oz.	1.66	1.43	1.25	1.11	1.0	.909	.833	.769	.714	.666	.625	.588	.555	.526	8 oz.
9 oz.	1.87	1.60	1.4	1.25	1.12	1.02	.927	.865	.803	.75	.703	.661	.625	.592	9 oz.
10 oz.	2.08	1.78	1.56	1.38	1.25	1.13	1.04	.961	.892	.833	.781	.735	.694	.651	10 oz.
11 oz.	2.29	1.96	1.71	1.52	1.37	1.25	1.14	1.05	.982	.916	.859	.809	.763	.736	11 oz.
12 oz.	2.5	2.14	1.87	1.66	1.5	1.36	1.25	1.15	1.07	1.0	.937	.882	.833	.788	12 oz.

Panel 12

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MEAT PORTION COST FINDER FOR PORTION CUT MEATS (NO LOSS FACTOR)

50c to $1.25 Per Pound

Per Lb.	*.50*	*.55*	*.60*	*.65*	*.70*	*.75*	*.80*	*.85*	*.90*	*.95*	*1.00*	*1.05*	*1.10*	*1.15*	*1.20*	*1.25*	*Per Lb.*
Per oz.	.031	.034	.039	.041	.044	.047	.05	.053	.056	.059	.063	.066	.069	.072	.075	.078	Per oz.
3 oz.	.09	.10	.11	.12	.13	.14	.15	.16	.17	.18	.19	.20	.21	.22	.23	.24	3 oz.
4 oz.	.12	.14	.15	.16	.18	.19	.20	.21	.23	.24	.25	.26	.28	.29	.30	.31	4 oz.
5 oz.	.16	.17	.19	.20	.22	.23	.25	.27	.28	.30	.31	.33	.34	.36	.38	.39	5 oz.
6 oz.	.19	.21	.23	.24	.26	.28	.30	.32	.34	.36	.38	.39	.41	.43	.45	.47	6 oz.
7 oz.	.22	.24	.26	.28	.31	.33	.35	.37	.39	.42	.44	.46	.48	.50	.53	.55	7 oz.
8 oz.	.25	.28	.30	.32	.35	.38	.40	.42	.45	.48	.50	.52	.55	.58	.60	.63	8 oz.
9 oz.	.28	.31	.34	.37	.39	.42	.45	.48	.51	.53	.56	.59	.62	.65	.68	.70	9 oz.
10 oz.	.31	.34	.38	.41	.44	.47	.50	.53	.56	.59	.63	.66	.69	.72	.75	.78	10 oz.
11 oz.	.34	.38	.41	.45	.48	.52	.55	.58	.62	.65	.69	.72	.76	.79	.83	.86	11 oz.
12 oz.	.37	.41	.45	.49	.53	.56	.60	.64	.68	.71	.75	.79	.83	.86	.90	.94	12 oz.
13 oz.	.41	.45	.49	.53	.57	.61	.65	.69	.73	.77	.81	.85	.89	.93	.98	1.02	13 oz.
14 oz.	.44	.48	.53	.57	.61	.66	.70	.74	.79	.83	.88	.92	.96	1.01	1.05	1.09	14 oz.
15 oz.	.47	.52	.56	.61	.66	.70	.75	.80	.84	.89	.94	.98	1.03	1.08	1.13	1.17	15 oz.
1 lb.	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95	1.00	1.05	1.10	1.15	1.20	1.25	1 lb.

$1.30 to $2.00 Per Pound

Per Lb.	*1.30*	*1.35*	*1.40*	*1.45*	*1.50*	*1.55*	*1.60*	*1.65*	*1.70*	*1.75*	*1.80*	*1.85*	*1.90*	*1.95*	*2.00*	*Per Lb.*
Per oz.	.081	.084	.088	.091	.094	.097	.10	.103	.106	.109	.113	.116	.119	.122	.125	Per oz.
3 oz.	.24	.25	.26	.27	.28	.29	.20	.31	.32	.33	.34	.35	.36	.37	.38	3 oz.
4 oz.	.33	.34	.35	.36	.38	.39	.40	.41	.43	.44	.45	.46	.48	.49	.50	4 oz.
5 oz.	.41	.42	.44	.45	.47	.48	.50	.52	.53	.55	.56	.58	.59	.61	.63	5 oz.
6 oz.	.49	.51	.53	.54	.56	.58	.60	.62	.64	.66	.68	.69	.71	.73	.75	6 oz.
7 oz.	.57	.59	.61	.63	.66	.68	.70	.72	.74	.77	.79	.81	.83	.85	.88	7 oz.
8 oz.	.65	.68	.70	.72	.75	.78	.80	.82	.85	.88	.90	.92	.95	.98	1.00	8 oz.
9 oz.	.73	.76	.79	.82	.84	.87	.90	.93	.96	.98	1.01	1.04	1.07	1.10	1.13	9 oz.
10 oz.	.81	.84	.88	.91	.94	.97	1.00	1.03	1.06	1.09	1.13	1.16	1.19	1.22	1.25	10 oz.
11 oz.	.89	.93	.96	1.00	1.03	1.07	1.10	1.13	1.17	1.20	1.24	1.27	1.31	1.34	1.38	11 oz.
12 oz.	.98	1.01	1.05	1.09	1.13	1.16	1.20	1.24	1.28	1.31	1.35	1.39	1.43	1.46	1.50	12 oz.
13 oz.	1.06	1.10	1.14	1.18	1.22	1.26	1.30	1.34	1.38	1.42	1.46	1.50	1.54	1.58	1.63	13 oz.
14 oz.	1.14	1.18	1.23	1.27	1.31	1.36	1.40	1.44	1.49	1.53	1.58	1.62	1.66	1.71	1.75	14 oz.
15 oz.	1.22	1.27	1.31	1.36	1.41	1.45	1.50	1.55	1.59	1.64	1.69	1.73	1.78	1.83	1.88	15 oz.
1 lb.	1.30	1.35	1.40	1.45	1.50	1.55	1.60	1.65	1.70	1.75	1.80	1.85	1.90	1.95	2.00	1 lb.

MEAT PORTION COST FINDER FOR PORTION CUT MEATS (NO LOSS FACTOR)

$2.05 to $3.50 Per Pound

Per Lb.	*2.05*	*2.10*	*2.15*	*2.20*	*2.25*	*2.30*	*2.35*	*2.40*	*2.45*	*2.50*	*2.60*	*2.75*	*3.00*	*3.25*	*3.50*	*Per Lb.*
Per oz.	.128	.131	.134	.138	.141	.144	.146	.15	.153	.156	.163	.172	.188	.203	.219	Per oz.
3 oz.	.38	.39	.40	.41	.42	.43	.44	.45	.46	.47	.49	.52	.56	.61	.66	3 oz.
4 oz.	.51	.53	.54	.55	.56	.58	.59	.60	.61	.63	.65	.69	.75	.81	.88	4 oz.
5 oz.	.64	.66	.67	.69	.70	.72	.73	.75	.77	.78	.81	.86	.94	1.02	1.09	5 oz.
6 oz.	.77	.79	.81	.83	.84	.86	.88	.90	.92	.94	.98	1.03	1.13	1.22	1.31	6 oz.
7 oz.	.90	.92	.94	.96	.98	1.01	1.03	1.05	1.07	1.09	1.14	1.21	1.31	1.42	1.53	7 oz.
8 oz.	1.02	1.05	1.08	1.10	1.12	1.15	1.18	1.20	1.22	1.25	1.30	1.38	1.50	1.62	1.75	8 oz.
9 oz.	1.15	1.18	1.21	1.24	1.27	1.29	1.32	1.35	1.38	1.41	1.46	1.55	1.69	1.83	1.97	9 oz.
10 oz.	1.28	1.31	1.34	1.38	1.41	1.44	1.47	1.50	1.53	1.56	1.63	1.72	1.88	2.03	2.19	10 oz.
11 oz.	1.41	1.44	1.48	1.51	1.55	1.58	1.62	1.65	1.68	1.72	1.79	1.90	2.06	2.23	2.41	11 oz.
12 oz.	1.54	1.58	1.61	1.65	1.69	1.73	1.76	1.80	1.84	1.88	1.95	2.07	2.25	2.44	2.63	12 oz.
13 oz.	1.67	1.71	1.75	1.79	1.83	1.87	1.91	1.95	1.99	2.03	2.11	2.24	2.44	2.64	2.84	13 oz.
14 oz.	1.79	1.84	1.88	1.93	1.97	2.01	2.06	2.10	2.14	2.19	2.28	2.41	2.63	2.84	3.06	14 oz.
15 oz.	1.90	1.91	2.02	2.06	2.11	2.16	2.20	2.25	2.30	2.34	2.44	2.58	2.81	3.05	3.28	15 oz.
1 lb.	2.05	2.10	2.15	2.20	2.25	2.30	2.35	2.40	2.45	2.50	2.60	2.75	3.00	3.25	3.50	1 lb.

MENU PRICING GUIDE

Per Cent Food Cost	*Factor*	*Per Cent Food Cost*	*Factor*	*Per Cent Food Cost*	*Factor*
30	3.3	37	2.7	44	2.27
31	3.2	38	2.63	45	2.22
32	3.1	39	2.56	46	2.17
33	3.0	40	2.5	47	2.12
34	2.94	41	2.43	48	2.08
35	2.85	42	2.38	49	2.04
36	2.8	43	2.32	50	2.00

Multiply the factor for your food cost percentage by the total food cost for the menu to obtain your menu price.

EXAMPLE: Total food cost for menu = $1.00
Food cost percentage = 33%

1.00 X 3.0 = $3.00

TABLE D'HOTE MENU

Tomato Juice

Roast Leg of Veal

Baked Potato Fresh Peas

Lettuce Wedge

French Dressing

Hot Rolls Butter

Ice Cream

Coffee

COST CONTROL SHEET

Food Item	Size of Portion Served	Total Amt to Purchase per Portion	Unit of Purchase	Cost per Unit	Portion Cost (Cost per Person)
DINNER					
Chilled tomato juice	4 oz.	4 oz.	qt. (32 oz)	$.30	
Roast Leg of Veal (loss factor 50%)	12 oz.	24 oz.	lb. (16 oz)	.60	
Baked Potato	4 oz.	4 oz.	lb. (16 oz)	.04	
Fresh Peas	2 oz.	2 oz.	lb (16 oz)	.22	
Lettuce Wedge	1/4 hd.	1/4 hd.	head	.19	
Fr. Dressing	3 oz.	3 oz.	qt (32 oz)	.35	
Hot Rolls	2 ea.	2 ea.	dozen	.22	
Ice Cream	1 #16 scoop	1/8 qt.	qt. (32 oz)	.24	
Coffee	1 cup	1/25 lb.	lb (16 oz)	1.00	
Cream	1/2 oz.	1/2 oz.	qt (32 oz)	.64	
Butter & other seasonings					.0100

TOTAL FOOD COST

TABLE D'HOTE MENU

Tomato Juice

Roast Leg of Veal

Baked Potato Fresh Peas

Lettuce Wedge

French Dressing

Hot Rolls Butter

Ice Cream

Coffee

COST CONTROL SHEET

Food Item	Size of Portion Served	Total Amt to Purchase per Portion	Unit of Purchase	Cost per Unit	Portion Cost (Cost per Person)
DINNER					
Chilled tomato juice	4 oz.	4 oz.	qt (32 oz)	$.30	.0375
Roast Leg of Veal (loss factor 50%)	12 oz.	24 oz.	lb (16 oz)	.60	.9000
Baked Potato	4 oz.	4 oz.	lb (16 oz)	.04	.0100
Fresh Peas	2 oz.	2 oz.	lb (16 oz)	.22	.0275
Lettuce Wedges	1/4 hd.	1/4 hd.	head	.19	.0475
Fr. Dressing	3 oz.	3 oz.	qt (32 oz)	.35	.0328
Hot Rolls	2 ea.	2 ea.	dozen	.22	.0367
Ice Cream	1 #16 scoop	1/8 qt.	qt (32 oz)	.24	.0300
Coffee	1 cup	1/25 lb	lb (16 oz)	1.00	.0400
Cream	1/2 oz	1/2 oz	qt (32 oz)	.64	.0100
Butter & other seasonings					.0100
			TOTAL FOOD COST		$1.1820

1. Portion control meat (no loss factor) costs you $1.05 per pound. What is the cost of a 6 ounce serving? _____.

2. When an item costs you 28¢ and you wish to generate a 55% gross profit, what is your selling price (to nearest nickel)? _____.

3. An item costs you 15¢ and you are working on a 45% food cost percentage. What is your menu selling price (to nearest nickel)? _____.

4. In your open mess, you expect 150 persons for lunch. You are going to serve a 6 ounce slice of turkey to each person. You know that turkey has a 35% yield. How many pounds of turkey will you purchase? _____.

5. Veal cutlets cost you $1.35 per raw pound. You want to serve 6 ounce patties. Veal has a 65% yield. What is the cost per cooked portion? _____.

6. Your kitchen opening inventory for 2 May was $60.00. Your issues for the day were $70.00. Your closing inventory for 2 May was $20.00. What is your cost of goods sold in the kitchen for 2 May? _____.

7. An item is selling on your menu for 30¢ and the item costs you 20¢. What is your food cost percentage for this item? _____.

8. In February your kitchen cost of goods sold and sales receipts are as follows:

	Cost of Goods Sold	Sales Receipts	Food Cost % (rounded off)
1 February	$400.00	$900.00	
2 February	$500.00	$1250.00	

   a. What is your food cost percentage for 1 February? _____.

   b. What is the accumulated food cost percentage through 2 February? _____.

9. You are serving prime ribs of beef to a banquet of 25 persons. Your kitchen tests show these ribs will give you 60% yield and your purchase price for the raw meat is $0.86 per pound.

   a. Give the number of pounds of prime ribs to purchase, if you are serving a 6 oz. portion?

   b. Give the portion cost of the 6 oz. serving.

10. A banquet for 300 persons has just been accepted by your club secretary. He in turn goes to you (a graduate of this course) and asks you how many pounds of pot roast he should purchase. You know the yield test for your specified roast is 62% and the portion served is 4 oz. How many pounds should be purchased?

11. After a close analysis of your menu, you have found that an a la carte tossed green salad costs you $0.43. If your open mess is working on a 51% food cost, what will be the selling price of this salad (to nearest nickel)?

12. Your total cost of goods sold (food) is $78.00. Your food sales for the same period are $181.00. Determine your food cost percentage.

13. You are serving a 7 oz. portion of a wholesale cut of beef; your kitchen tests show a 67% yield and your cost per raw pound is $0.62.

    a. Determine the cost of a cooked 7 oz. serving.

    b. With a 47% food cost percentage what will be your portion selling price?

14. You buy a 24 pound turkey at a price of $0.41 per pound. Your kitchen tests show a yield of 35%.

    a. What is the cost of a 2 oz. serving?

    b. What is the cost of a 3 oz. serving?

15. A portion controlled meat (no loss factor) costs you $1.30 per pound. What is the cost of a 6 oz. serving?

16. Your issue slips and kitchen inventories have given you the <u>cost of goods sold</u> for the following days:

1 March	$420.
2 March	200.
3 March	400.

Your <u>sales receipts</u> for these respective days are as follows:

1 March	$800.
2 March	500.
3 March	680.

a. What is the daily food cost percentage for each day?

b. What is the accumulated food cost percentages through the 2nd of March?

c. What is the accumulated food cost percentage through the 3rd of March?

17. You purchase sirloin steaks (bone in strip) for $1.26 per pound. What is the cost of a 10 oz. cooked portion when costing the entire meal?

18. A portion controlled meat having no loss factor cost you 40¢ per serving portion. You sold it for 60¢ per serving portion. What was your food cost percentage?

Panel 17-continued

SOLUTION SHEET

1. Answer: \$.394 Computation: $\frac{1.05 \times 6}{16} = \frac{6.30}{16} = .394$ (formula 3) panel 6

2. Answer: \$.60 Computation: 100% - 55% = 45% food cost %; (formula 5) panel 6)

(formula 4) panel 6

```
      .62
.45./.28.0
  27 0
   1 00
     90
     10
```

or .60 (to nearest nickel)

OR

```
  2.22
x  .28
 17 76
 44 4
 .62 16
```

(panel 14) or .60 (to nearest nickel)

3. Answer: \$.35 Computation:

(formula 4) panel 6

```
      .33
.45./.15.000
  13 5
   1 50
   1 35
     150
```

or .35 (to nearest nickel)

OR

```
  2.22
x  .15
 11 10
 22 2
 .33 30
```

(panel 14) or .35 (to nearest nickel)

4. Answer: 161 lb. Computation: $\frac{150 \times 6}{.35 \times 16} = \frac{900}{5.60} = 160.7$ or 161 (formula 1) panel 6

5. Answer: \$.78 Computation: $\frac{1.35 \times 6}{.65 \times 16} = \frac{8.10}{10.40} = .779$ or .78 (formula 2) panel 6

6. Answer: \$110. Computation:

```
 60.
+70.
130.
-20.
110.
```

(formula 7, panel 6.1)

7. Answer: 67% Computation: $\frac{.20}{.30} = .666$ or .67 (formula 8) panel 6.1

8. Answer: 44% Computation:

```
      .444
900/400.000
  360 0
   40 00
   36 00
    4 000
    3 600
```

(formula 8) panel 6.1

Panel 17.1

b. Answer: 42% Computation:

$$\begin{array}{r} 900 \\ +\ 1250 \\ \hline 2150 \end{array} \qquad \begin{array}{r} 400 \\ +\ 500 \\ \hline 900 \end{array}$$

$$\begin{array}{r} .418 \\ 2150\overline{)900.000} \\ 860\ 0 \\ \hline 40\ 00 \\ 21\ 50 \\ \hline 18\ 500 \\ 17\ 200 \\ \hline 1\ 3000 \\ 1\ 2900 \\ \hline 100 \end{array}$$

9 or .42 (formula 8, panel 6.1)

9. a. Answer: 16 lb. Computation: $\frac{25 \times 6}{.60 \times 16} = \frac{150}{9.60} = 15.6$ or 16 lb. (formula 1, panel 6)

b. Answer: $.537 Computation: $\frac{.86 \times 6}{.60 \times 16} = \frac{5.16}{9.60} = .537$ (formula 2, panel 6)

10. Answer: 121 lb. Computation: $\frac{300 \times 4}{.62 \times 16} = \frac{1200}{9.92} = 120.9$ or 121 lb. (formula 1, panel 6)

11. Answer: $.85 Computation: $\frac{.43}{.51} = .84$ or .85 (to nearest nickel) (formula 4, panel 6)

12. Answer: 43% Computation: $\frac{\$78.}{\$181.} = .43$ (formula 6, panel 6.1)

13. a. Answer: $.405 Computation: $\frac{.62 \times 7}{.67 \times 16} = \frac{4.34}{10.72} = .405$ (formula 2, panel 6)

b. Answer: $.85 Computation: $\frac{.404}{.47} = .859$ or .85 (to nearest nickel)

14. a. Answer: $.146 Computation: $\frac{.41 \times 2}{.35 \times 16} = \frac{.82}{5.60} = .15$ (formula 2, panel 6)

b. Answer: $.219 Computation: $\frac{.41 \times 3}{.35 \times 16} = \frac{1.23}{5.60} = .22$ (formula 2, panel 6

15. Answer: $.49 Computation: $\frac{1.30 \times 6}{16} = \frac{7.80}{16} = .49$ (formula 3, panel 6)

or panel 13

16. a. 1 March Answer: 52.5% Computation: $\frac{420.}{800.} = .53$

2 March Answer: 40.0% Computation: $\frac{200.}{500.} = .40$

3 March Answer: 59% Computation: $\frac{400.}{680.} = .59$

b. Answer: .48% Computation: $\frac{620.}{1300.} = .48$

c. Answer: 52% Computation: $\frac{1020.}{1980.} = .52$

17. Answer: $.9844 Computation: $\frac{1.26 \times 10}{.80 \text{ (panel 10)} \times 16} = \frac{12.60}{12.80} = .9844$ (panel 9)

18. Answer: 67% Computation: $\frac{.40}{.60} = .666$ or .67 (formula 6, panel 6.1)

Panel 17.1-continued

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SPECIAL TEXT

CLUB RESTAURANT OPERATIONS

This publication is provided for resident and nonresident instruction at the Quartermaster School only. It reflects the current thought of this school and conforms to printed Department of the Army doctrine as closely as possible.

This copy is a reprint which includes changes and corrections to the original edition.

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FORT LEE, VIRGINIA

SUPPLY TRAINING CENTER OF THE ARMY SCHOOL SYSTEM

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QUARTERMASTER SCHOOL NOTE

This special text is a copy of publication MCI 33.2b, 28 June 1966, published by the Marine Corps Institute, Marine Barracks, Washington, D. C.

Minor changes have been made in the information appearing in the MCI publication in order to eliminate reference to Marine Corps and Navy publications, and, instead, to redirect the reader to Army and Air Force counterpart publications. However, the MCI publication's basic information, which is applicable to any well-run military or civilian club, has been left unchanged.

Permission to reuse the material from Wenzel's Menu Maker (see footnote, page ii) has been granted by G. L. Wenzel, author and copyright holder.

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CLUB RESTAURANT OPERATIONS[1]

PREFACE

This manual was written for the guidance of those persons who wish to do a better job in the management and control of messes and clubs. It provides considerable information which, if studied and applied, will aid in the achievement of the goal: "the greatest service at the least expense."

Although no two messes or clubs are operated exactly alike, the principles of good management remain the same regardless of the type or size of operation. To successfully operate a mess or club, whether a large Commissioned Officers' Mess or a small Enlisted Men's Club, it is necessary to apply these principles to menu planning and pricing, purchasing procedures, food cost control, portion control, and formula cooking.

Messes are authorized primarily for morale and recreational purposes. Even so, their management, to be effective, must conform to good business practices.

Evaluations of various area auditors reveal that most messes and clubs sustain a definite loss in the food service function, and that such loss has to be absorbed by profits from other areas such as bar and liquor sales or promotional events. This manual is designed to help remedy this situation and promote a more profitable club operation.

This manual is written on the officer and staff NCO level.

Figures and prices in this course are for INSTRUCTIONAL PURPOSES ONLY and will not represent actual prices in effect in all areas.

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[1]This manual was compiled mainly from material extracted, by permission, from G. L. Wenzel, Wenzel's Menu Maker (revised 1949 edition of the American Menu Maker published by G. L. Wenzel, 403 Riley Road, Austin, Texas), and from Accounting Systems for Open and Closed Messes Ashore, NAVEXOS P-1032 (Department of the Navy, Office of the Comptroller, 31 May 1952, revised 30 June 1954), with Changes to September 1955.

This manual was originally written as a series of lectures, which were given in the classroom at the Marine Corps Supply Schools, Camp Lejeune, N. C. It retains some of its original style, that of the lecturer to his students.

Chapter 1

MENU PRICING AND PLANNING

To understand menu pricing and planning it is first necessary to define food cost.

Food cost is the cost of your food at market prices.[2] When we speak of food cost, we are speaking of just one of our expenses that must be paid. Food cost is the primary factor in determining a menu price that will yield enough profit to pay all expenses. In selling food, remember that to break even or make a profit, you must determine your percentage of food cost in comparison with your other expenses. A typical breakdown of each dollar received would be as follows:

Food cost.....	$0.45	45%
Payroll.....	.24	24%
Other expenses.....	.27	27%
Net profit.....	.04	4%

100% equals gross income (total sales).
Percentage is thus the only method for a sound business operation.
These percentages are discussed more fully in chapter 3.

The menus served in field ration messes throughout the Army and Air Force are derived from Department of the Army supply bulletin SB 10-260 and Department of the Air Force Pamphlet AFP 146-1, a publication issued by the Department of the Army and the Air Force each month. As taught in this chapter, menu pricing is not applicable to field ration mess management and accounting but is the financial key to an open mess food service activity where a profit and loss ledger is used to measure the ability of the management.

This chapter deals with menu planning and food cost control procedures for officers and enlisted open messes and is designed to teach you how to plan menus and set up a food cost control system.

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[2] The purchasing procedures at the market price are discussed in chapter 2; but before you make your purchases you must plan your menu and determine your menu price.

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Successful restaurant operation has taught us that the most profitable menu is a simple one. The job of planning such a menu is not an easy one. The profit from your dining room reflects the amount of effort that went into the planning of the menu. With a slogan or "gimmick," food service can be more effectively mechandised to many potential customers. To cite an example: A "Drive-In" was serving 7½-ounce hamburger steak, potatoes, and salad, but it was moving more slowly than the management thought it should. So they increased the steak to eight ounces and used the slogan "half pound ground round" to push it. It became a very popular item on the menu. Another menu slogan is "Half Fries for Small Fry," provided for children up to 12 instead of the children's plate.

The first factor to consider is the price of the menu. There are several methods to determine the price of the menu. The easiest and most often used method is the fixed cost.

This method uses a fixed cost for the other courses on the menu such as appetizer, vegetable, bread and butter, dessert, and beverage. By using the fixed-cost method, the cost of the entree (main dish) determines the cost of the menu.

In order to determine what your menu price must be, you have to follow certain steps. These steps are given in the menu pricing guide (table 1).

Table 1. Menu Pricing Guide

Food cost (%)	Price factor	Steps in determining: menu price and percent of food cost
30	3.3	Step 1: Add cost of entree and each course to de-
31	3.2	termine total meal cost.
32	3.1	
33	3.0	Step 2: Locate menu price factor (in column 2)
34	2.94	corresponding to food cost percentage de-
35	2.85	sired.
36	2.8	Step 3: Multiply total meal cost by price factor to
37	2.7	determine menu price.
38	2.63	
39	2.56	EXAMPLE:
40	2.5	
41	2.43	Step 1: Meat entree is 4-oz veal cutlet; cost . . 30¢
42	2.38	All other courses (appetizer, soup
43	2.32	vegetable, etc.) . . . . . 20¢
44	2.27	
45	2.22	Total meal cost . . . . . 50¢
46	2.17	Step 2: Using a 40% food cost, multiply 50¢ by the
47	2.12	corresponding menu price factor (in column
48	2.08	2): 2.5.
49	2.04	
50	2.00	
		Step 3: The result is a menu selling price of $1.25.

With your menu cost established, you know what your food-cost percentage must be.

The fixed-cost method requires that the cost of the entree be added separately because the entree is the most expensive item of the menu.

If you do not accurately determine the cost of each item served, then you are guessing at the food cost--and guessing is not profitable.

Take for example a low-cost menu:

Vegetable	$0.03
Appetizer or soup	.03
Potato	.03
Bread and butter	.03
Dessert	.05
Beverage	.03
Total	.20

Now these six items which are the other courses of a menu are fixed. In other words, regardless of what food item these courses are, the cost must be this figure which is fixed. Perhaps you are thinking that the cost of those food items will be determined by the price you purchased them for, which is true to a certain extent. The unit cost of these various food items is very important; by this you can determine how much of the food item you can serve for your fixed price. This is where your portion control (chapter 4) comes in. Portion control is nothing more than the proper amount to serve to stay within your fixed-cost allowance.

Now that you have determined the cost of the other items, you add the cost of the entree and multiply by your selected figure for your food cost to determine the menu price.

For example, say your entree costs $0.20; you add this to the previous total of the other costs and find out that the total food cost of this menu is $0.40.

For a 33% food cost, multiply the .40 x 3 which gives you 1.20.
For a 40% food cost, multiply the .40 x 2.5 which gives you 1.00.
For a 50% food cost, multiply the .40 x 2 which gives you 0.80.

A higher priced meal would use the following fixed costs:

Appetizer or soup	$0.05
Salad	.05
Vegetable	.04
Potato	.03
Bread and butter	.04
Dessert	.05
Beverage	.04
Total	.30

With a higher food cost of other courses such as these, your menu prices must also be higher.

By using the same priced ($.20) entree and the scale in Table I, your menu prices would read $1.50, $1.25, and $1.00.

Incidentally, these food-cost figures and percentages do not include employees' meals.

Employees' meals will add to your food cost about 3% to 5%. Therefore, you must also figure in this percentage for your total food cost.

If you want a 40% food cost, you would have to use a 35% menu price to allow for the additional 5% for employees' meals.

We have gone over a low and a higher price fixed-food-cost menu. We will go over one more fixed-food-cost menu which has been found to be about average at all profitable eating places.

Appetizer or soup	$0.03
Salad	.04
Vegetable	.04
Potato	.03
Bread and butter	.04
Dessert	.05
Beverage	.05
Total	.28

This fixed-cost scale, based on a $0.20 entree, would give you menu prices of $1.45, $1.20, and $.95, using a 33, 40, and 50% food cost respectively.

Allowances for the cost of the courses can be revised to suit your own particular needs. The cost of the other courses should be between $0.02 and $0.06, depending on the menu.

If you are using a 40% food cost basic, remember that every $0.02 you add to the food cost increases the menu price $0.05. For every $0.02 you decrease the food cost, your menu price decreases $0.05.

Luncheons are usually figured on a smaller scale because of the low menu price. Here are some figures for lunches:

Vegetable	$0.03
Potato	.03
Bread and butter	.03
Garnish	.01
Total	.10

Note that the lunch menu omits the appetizer or soup, the dessert, and the beverage. This reduced scale helps to provide for a low menu price.

The entree for a luncheon is usually smaller and less expensive than the regular dinner menu. Just as an example, say we keep the same entree which we have been using.

Add the cost of the entree to the fixed allowance for the luncheon and you have $0.30; now use your standard to determine your menu price: 30% . . . . . $1.00; 40% . . . . . $0.75; 50% . . . . . $0.60.

We may also work from the other direction.

Many times eating establishments must think in terms of the total cost of the meal. This fact is very true of department store dining rooms and lunch counters.

It is a good old American custom to get the most for the least and many meals are bought with this fact in mind.

Let us suppose you have already determined that you want a 45% total food cost and you have already determined that the majority of your lunch checks are between $0.50 and $0.85. The next step is to set up your menu prices.

Lunch #1	Lunch #2	Lunch #3	Lunch #4
$0.50	$0.60	$0.75	$0.85

Next, determine your total food cost of these lunches on the 45% basis:

.50	.60	.75	.85
.45	.45	.45	.45
250	300	375	425
200	240	300	340
.2250 = .23	.2700 = .27	.3375 = .34	.3825 = .38

Now after determining your total food cost of these lunches, apply your basic fixed cost to these and find that:

On lunch #1 you can allow $0.13 for the entree.
On lunch #2 you can allow $0.17 for the entree.
On lunch #3 you can allow $0.24 for the entree.
On lunch #4 you can allow $0.28 for the entree.

The ultimate success of the menu and the dining room rests with the customer. THE CUSTOMER MUST BE SATISFIED WITH WHAT HE GETS. This can be accomplished only by attractive, well prepared meals, well proportioned and fairly priced.

If the food is not well prepared, then the customer cannot be satisfied even with a generous helping and a low price. If the portions are not adequate, then regardless of the appeal of the food itself, the customer will not be satisfied that he is receiving the true value for his money.

You will find very few gourmets among regular dining room patrons. For the most part the type of guest you will be catering to will appreciate plain wholesome food, served generously and priced moderately.

Your menus should be planned for the type of customers who are going to patronize the dining room. You cannot make out a good menu for any eating establishment unless you know who the customers are going to be.

Do not misunderstand. This does not mean that you should select what seems to be the larger segment of your customers and plan the menu exclusively for them. By no means! The menu must have variety but it should appeal to the representative type of customers you know are regular patrons.

The menu you plan should be based on the following:

Total food cost percentage.
Other courses' fixed allowance.
Entrees' allowance.

Table 2 below is a well planned sample menu, written with a view to tempt the appetite.

TABLE 2. SAMPLE MENU

Garden Crisp Vegetable Salad — Choice of Dressing

1. Roast Prime Ribs of Beef, au jus — $2.20
   our own special Western Steer beef roasted slowly in its own juices. Served with an oven-hot baked Idaho.

2. Grilled Pork Chop, Hawaiian Style — 1.15
   A thick, lean pork chop sautéed with golden chunks of pineapple to a delicate brown.

3. Salmon Steak — 1.05
   Ocean fresh salmon broiled with butter and served with fluffy whipped potatoes and snap beans.

4. Rainbow Salad — 1.35
   This plate brings out the artist in all of us. Crisp leaves of lettuce, flavorful baby carrot sticks, emerald slices of sweet peppers, tender celery hearts, full meated slices of ripe juicy tomatoes, surrounding a mound of refreshing lime sherbet.

5. Macaroni and Cheese Casserole — .70
   Wisconsin aged cheddar cheese is our secret here--- so flavorful that the aroma is almost a meal.

6. Breaded Veal Cutlet — 1.45
   Milk-fed baby veal fried to a golden hue, served with whipped potatoes and mushroom gravy.

Apple Pie	.30	Strawberry Jello	.20	Butterscotch Pudding	.25
Coffee	.10	Tea	.10	Milk	.15

TRY OUR HUSHPUPPIES

Hushpuppies, a southern dish featured with our seafoods, consist of corn meal, pancake flour, and finely ground onions, deep-fat fried. They originated with the Florida Indians. You may obtain the recipe from the Chef.

Now that we have covered the pricing of the menu, we will continue with our menu planning. This approach may seem like putting the dessert before the entree; but we must first know our objectives before we can plan our assault.

Remember that a menu must have variety in order to appeal to the different types of customers, and it should also be simple. With these two points in mind we will proceed with the planning of the actual menu.

You may say to yourself that a menu which will offer something to each different customer will have to be large and extensive. On the other hand you may say, "How is it possible for me to offer an extensive choice of items and still maintain a simple menu?" These two questions are and always have been uppermost in the minds of the managers of all eating establishments.

The size of the menu is, of course, controlled by different circumstances. A specialty eating establishment (for instance, a "Spaghetti House") may only have two or three entrees. On the other hand, a plush dining room in a luxurious hotel must carry a very wide selection of foods. Food experts suggest that the maximum number of entrees should be seven or eight.

G. L. Wenzel, author of Wenzel's Menu Maker, suggests that a good format for a simple menu would be the following:

1 Roast	Beef	Roast Ribs of Beef
1 Solid . . . . (such as chops)	Pork	Grilled Pork Chops
1 Fish	Fish	Broiled Lake Trout
1 Prepared . .	Poultry . . .	Chicken Fricassee
1 Meatless . .	Meatless . . .	Salad Plate

In addition to these, you can run foods that are repeated daily, such as steaks and chops. Remember that your food costs increase in proportion to the number of items on the menu.

You are not expected to learn everything about menu planning, but you should become familiar with the basic principles of planning menus.

Anyone who is responsible for planning menus makes his first mistake if he thinks he can plan menus by himself. The menu planner must work together with the chef and possibly with the stockroom man if he is running a large-scale operation.

The following factors must be taken into consideration for club menu planning.

(1) Menu pricing.
(2) Selection of menu items.
(3) Variety.
(4) Customer appeal:
    Appearance . . . . . Color . . . . . Texture
    Flavor . . . . . Contrast . . . . Form
(5) Equipment.
(6) Leftovers.
(7) Balance.

This is actually a small list of factors to keep in mind. A more impressive list could easily be compiled.

Table 3 is a list of food preferences which is the result of a very detailed analysis.

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Table 3. A List of Food Preferences

(Analysis of one successful eating establishment over one year)

ENTREES

First preference	Second preference	Third preference
Roast beef	Roast lamb	Roast veal
Roast chicken	Roast duck	Beef liver
Roast turkey	Beef stew	Pork tenderloin
Roast ham	Chicken fricassee	Sweetbreads
Broiled chicken	Corned beef	Lamb kidneys
Roast pork	Sausage	Beef kidneys
Broiled steak	Calf's liver	Chipped beef
Lamb chops	Vegetable dinner	Pork and beans
Pork chops	Boiled tongue	Pig's knuckles
Veal cutlets	Lamb stew	Veal fricassee
Swiss steak	Pot roast	Broiled flank steak
Chicken pot pie	Braised shortribs	Omelets
Fried chicken	Hamburger	

VEGETABLES

First preference	Second preference	Third preference
Peas	Cabbage	Egg plant
Green beans	Cauliflower	Turnips
Lima beans	Spinach	Squash
Corn	Broccoli	Parsnips
Tomatoes	Brussels sprouts	Rutabagas
Asparagus	Beets	Cucumbers
Celery	Carrots	Onions

This list is by no means all-inclusive. Your own list can be made from a daily analysis of what your customers eat.

Your business is to sell food. If you expect to do that, your menu must feature items which have customer preference.

Clip-ons or riders as a means of selling leftovers or special low-cost items have proved to be very successful.

This chapter on menu pricing and planning should make you aware of the fact that menu planning requires a lot of thought and enterprise in order to make the food business profitable. To summarize.

The cost of the menu must be determined. The system which we have discussed was the fixed-allowance system, used whenever the cost of all the courses except the main course is predetermined. Then, to this figure you add the cost of the entree. After that you multiply by your price factor (given in table 1) to determine the new menu price:

If you want a food cost of 33%, multiply by 3;
If you want a food cost of 40%, multiply by 2.5;
If you want a food cost of 50%, multiply by 2.

Remember also that your menu should be

Simple.
Varied.
Properly priced.
Attractive.

Chapter 2

PURCHASING PROCEDURES

This chapter deals with general purchasing procedures and presents some specific information on the purchasing of:

(1) Meats
(2) Seafood
(3) Poultry
(4) Dairy products
(5) Canned fruits and vegetables
(6) Fresh fruits and vegetables

The objective of furnishing some detailed procedures for purchasing the above items is to afford you an opportunity to gain an appreciation of buying specifications.

You may take advantage of the sales commissary if there is one located on your post. If a sales commissary is not available, you may obtain persmission to purchase supplies from the supporting issue commissary by contacting the commissary officer in accordance with AR 230-5. You will find that the issue commissary and the sale commissary officers have a broad knowledge of subsistence and procurement, and their advice should be sought whenever necessary.

Some club managers find the sales commissary to be an excellent source for a number of items. The selection is often limited at the issue commissary and even though you may be authorized to utilize the issue commissary, you may find it cannot furnish all your needs. Luxury items, items for catering, etc., are examples of types of items you will not find in great amounts or varieties in the issue commissary, and so you will often buy on the open market.

You will be confronted with both problems and risks when you set out to buy the food supplies for your mess, and the pitfalls are many. No matter what food items you are buying, there are three basic things you must consider:

(1) Quality
(2) Net weight
(3) Yield obtainable

Now you may be wondering about price, which is natural, but you shouldn't consider price until you are sure of the three factors above. Don't try to outsmart the dealer. He knows his business and

has a fair idea of how well you know yours. The smart buyer knows prices and recognizes quality---but discusses quality first and price last.

A study of the market systems would show you that the produce man makes about 25% profit on each box, bushel, or crate. When you ask for "a price" you're simply asking for a part of his profit, and you'll probably get only a lot more air, water, or unusable bulk. Price buying is sharp practice and like a double-edged sword, it cuts both ways.

"Volume buying" (buying large quantities only because of bargain prices) is not always a good practice because an excessive amount of food around often tempts the cooks to become a little less careful. A better way is to buy frequently, making sure you get the greatest yield (most portions) from every purchase. Your food inventory should turn over five times a month. If your monthly food bill is $3,000, your inventory at the end of the month should be around $600 or 20% of your total food bill.

Beware of agents who try to undersell their competitors. They most likely depend upon short weights, water, air, or deceptive packaging of one kind or another to make up the difference.

When fruits and vegetables come into season, the early prices are usually high but gradually subside, and are lowest at the peak of the season. A set of seasonal charts will tell you what is coming in each month, the prices for the past 10 years, and the probable price for that particular month.

U.S. Grade "A" or fancy canned fruits and vegetables are high quality foods. They are graded carefully as to size, color, and maturity. Grade "B" products are choice but not uniform in size, color, and maturity compared with grade "A". But grade "B" products are often preferred because they are not likely to break down as easily as the more tender grade "A" products. It would be suitable to buy grade "A" for the home, but grade "B" may stand up better in a steamtable.

No attempt is made here to take sides in the dispute between the advocates of strict Government grades and the canners' preferences of "descriptive" or "informative" labels. As a buyer, you should check for yourself. The Department of Agriculture will give you an unbiased opinion for a small charge.

Fresh, frozen, or canned foods. The decision of which to buy rests with you. The comparison of all three from a price and portion cost standpoint are given whenever possible. Assuming that you buy the finest quality of all three, the choice is highly controversial.

Most eating establishments buy the fresh products in the usual market containers, such as bushels, hampers, and so on. Frozen vegetables in institutional size packs (2 1/2 or 3 lb) are very handy for restaurants. The popular can sizes are numbers 2, 2 1/2, 5, and 10.

You will be interested in market conditions and such information may be obtained from a number of sources:

(1) Salesmen and members of wholesale grocer organizations.
(2) Canning magazines, which quote prices by canners throughout the country.
(3) Government publications, which forecast the size of crops and give statistics covering quantities packed. They also give facts, such as how much is earmarked for Government use.

It is strongly recommended that you keep a small file index on all wholesalers or jobbers you do business with. You will want a checklis of pertinent information concerning each transaction. By referring. to your card, you may determine:

(1) The phone number of the concern.
(2) The saleman's name.
(3) Dates when the salesmen call.
(4) A list of the products offered.
(5) Remarks concerning service, quality, price, etc.

The card index system is also very helpful in the event you are replaced and your replacement does not have the opportunity to be orientated in his job.

Contract buying. In buying by contract, you should first develop a set of your own specifications. You should know what months to buy the various items. Be sure your guarantee is properly stated in your agreement: It should cover any possible price decline; swelled, dented or rusty cans; evidence of thawing and refreezing, and the like; and should include the time and place of delivery.

If you are buying goods already packed, obtain samples so you can check the quality. If goods are not yet packed, make the contract subject to your approval on receipt of samples.

Your specifications and contract should always be in writing.

Your contract should specify your right to obtain at least two samples; one at the time of buying; and the other at the time of delivery--your acceptance depending on your approval of the second sample. This gives you an opportunity to determine if the delivery complies with the specifications.

Each sample should be marked with the bid number, name of product, name of bidder, and other pertinent data. All charges, including cartage (hauling), should be prepaid by the bidder.

Proposals should be sealed with the name and address of the bidder in the upper left corner and the date and hour of opening of bids should also be shown.

Inspection of deliveries should be done carefully.

The contractor should be responsible for merchandise until delivered at a designated point.

If the contractor fails to make delivery within the time specified, you should specify the right to terminate the contract and stop further deliveries. Or you may reserve the right to purchase similar merchandise on the open market with the contractor being liable for the excess costs (probably allowing the contractor a loophole in the event of situations beyond his control). The contractor should be obligated to notify the purchaser within a certain number of days if a delay is expected.

The buyer's responsibility. You should always pay the contractor promptly for accepted merchandise, less discounts stipulated. Bear in mind that the less cost entailed for your transaction, the better terms and arrangements can be found for your benefit.

If you want to do business on a "big deal" basis, it will be necessary for you to understand and appreciate some of the "big deal" problems and avoid unnecessary costs and expenses such as rush orders, extra deliveries, and needless bickering over small claims. You may not have sufficient storage space for the whole order, and may want to

stagger delivery in lots of three months' supply. Chances are you may have to pay extra storage charges for this service, so look into this very thoroughly before committing yourself.

Buy suitable items for your particular needs. In determining what is best for your use, consider:

(1) Type of operation and clientele.
(2) Menu and price policy.
(3) How and when food is to be used.
(4) Desired quality.
(5) Physical condition for storage.

No matter how cheap the purchase price is, unless the product can be sold profitably it should not be purchased. The food business is a merchandising operation, and good merchandising would not include selling refrigerators to the Eskimos and snowshoes at the equator for "bargain prices."

The quality buyer doesn't always buy the best and most expensive grade of any one item. He does buy the best grade sold to fit the need. For instance, you should buy choice tomatoes for stuffed tomato salad; but you should not buy grade "A" tomatoes for stewing.

Sometimes when meat prices are high, the difference between U. S. Good and U. S. Choice may be 30¢ a lb. In this case, it is worth an investigation to determine whether or not you can use the Good grade of meat.

The manager who boasts that he buys only top grades is not necessarily a good manager. He may easily enough be boasting over needless and wasteful expenditures.

The United States Government defines specification buying as merely the utilization of well defined particulars in the purchasing of merchandise.

Specifications must be selected with care. If used effectively, they will provide uniformity and consistency in your purchases and thus help you maintain the food cost desired in your establishment.

The specifications currently in effect should be distributed to the various purveyors for their information and use. Such specifications should also include delivery information and conditions.

Your receiving clerk should have a set of specifications readily available when he inspects incoming mechandise. Effective specification buying requires receiving by specification as well as buying by it.

In buying by specification, just as in other procedures, purchases must be made at the most favorable prices obtainable through competitive market quotations.

Do not be misled by some unit prices. For example: one hamper of green beans may weigh 30 lb and another that is quoted for a few cents less may only weigh 25 lb. The logical thing to do in a case like this is to specify either the 25-lb or 30-lb hamper, and the approximate maturity of said beans, along with other applicable data.

Specifications must be followed consistently to be effective. The full value of a set of specifications depends on how and with what accuracy they have been developed.

To illustrate, here is a well-written, detailed specification:

Beets, sliced
Fancy Grade, New York locality
Slice dimensions: $2\frac{1}{2}$ inches in diameter
$\frac{3}{8}$ -inch thick
Dark red color, free of blemishes, broken slices, and end cuts.
Texture: Tender and succulent
Drained weight: 4 lb 10 oz. Net weight: 6 lb 10 oz.

To be more specific, we will look into specification buying as related to meats. Know what you want and make up a detailed specification for each meat item. When a salesman calls on you, all you have to do is take out your specification list and check it against his products. After a while, the dealer will have a specification list and you can order your merchandise by telephone.

The purchasing specification form will help you control your quality and your purchases by setting a standard of legitimate cuts and other measurements that will give you uniformity in yields.

First, you must decide on the grade of meat your mess uses. You can rely on the Government grades or study up on the grading factors yourself.

In buying ribs and short loins, look for and accept cuts that have:

(1) Marbling in the ends, (marbling is a quality in meat determined by the color of mixture of lean meat with fat).
(2) Fat cover not in excess of 1/2 in.
(3) Buttons (well-formed ends on rib bones).

These three things will give you flavor in your roasts and steaks. After you have obtained the desired fine flavor, consider yield. Yield comes with conformation. Look for thickness in the eye and end portions.

The eight U.S. beef grades are:	Military grade code
(1) Prime	(1) Grade A
(2) Choice	(2) Grade B
(3) Good	(3) Grade C
(4) Standard	(4) Grade D
(5) Commercial	(5) Grade E
(6) Utility	(6) Grade F
(7) Cutter	(7) No military grade
(8) Canner	(8) No military grade

In the prime and choice grades, only the steers and heifers of the beef-bred type are allowed. The Good grade includes well finished cow of the beef-bred type; but excludes all dairy-breed types.

Conformation. Conformation applied to the carcass, side or cut. Actually it is the ratio of meat to bone, general build, form or shape.

Finish. Finish refers normally to the finish on the outside of the carcass, but it can and does mean finish on the inside, and distribution of fat.

Quality. Quality refers to the color, texture, and firmness of lean, and character of fat and bone.

In grading beef, the Government grader allows points for each of three factors: conformation, finish, and quality. For example:

Conformation	(1)	Compactness	0-14
	(2)	Thickness	0-14
Finish	(3)	Excess fat or deficient fat	0-14
	(4)	Color of fat	0-14
	(5)	Marbling	0-28
	(6)	Color of lean	0-14
Quality	(7)	Color and hardness of bones	0-14
		Total points	0-112

A prime carcass would get 28 points on marbling and 14 points on each of the other six factors. You may add these and find the total of 112 points for Prime grade. The remaining six grades are graded accordingly. The variations are as follows:

Grade	Points Max	Points Min
Prime	112	96
Choice	95	80
Good	79	64
Standard	63	48
Commercial	47	32
Utility	31	16
Cutter	15	0
Canner	10	0

Packers' brands. Packers' brands compare with Government grades somewhat as follows:

Table 4. Comparison of Government and Packers' brands

Government equivalent	Govt symbol	Packer symbol	Armour	Cudahay	Swift	Wilson
Prime	A	1	Star	Puritan	Premium	Certified
Choice	B	2				
Good	C	3	Quality	Fancy	Select	Special
Standard	D	4	Banquet	Cudahay	Arrow	Leader
Commercial	E	5	None	None	Sanco	Wilsco

In drawing your specifications form, remember to list the amount on hand, portions, and amount to order, specific meat measurements, and weights of each item. It would be wise to allow space for three quotations on your specification form.

Your specification chart for veal and pork will be similar to this one. A knowledge of meat cutting, although not essential, will help you develop your pork and veal specifications. Remember veal dresses approximately 56%. Pork is sold by wholesale cuts. You can draw up any kind of a specification by using this chart as a guide.

Seafood is always in demand and a thorough knowledge of purchasing seafood is a must for a buyer in any type of food service activity.

Some of the things to remember when buying fish include:

(1) Color	Good fish have a shiny color and a bright color for that variety.
(2) Eyes	The eyes should be transparent and bulging.
(3) Gills	Gills should be closed. Open gills denote stale fish especially if a grayish or yellow filament is present.
(4) Odor	Strong odor indicates bad fish.
(5) Texture	Flesh should be elastic and firm. When pressed, the flesh should spring back. Slimy skin indicates stale fish.

Some of the popular fresh water fish are blue pike, brook trout, lake smelt, lake trout, pickerel, whitefish, yellow perch, yellow pike.

You may buy your fish in the form of fillets, ready to use, dressed with heads on or off; or the round (whole fish) with the entrails in.

You can find out when these fish are abundant and, after completing chapter 4, you can use your portion and cost control system to arrive at the best size for your purpose. We will go into portion control in chapter 4.

In drawing up your specification form, be sure to include:

(1) A list of popular or best sellers.
(2) The months in which these best sellers are available.
(3) Manner of dressing.
(4) Size.
(5) Form of delivery.

(a) Chilled and on ice.
(b) Solidly frozen.

When you purchase clams in the shell, be sure they are alive. To determine this, tap the shell. Soft clams will pull in their necks while hard shells will close up tightly. Clams have the following minimum diameters: Small clams, 2 inches; medium clams, 3 inches; large clams, 4 inches. The hard clam is prefered for chowders because of its characteristic stronger flavor.

Small clams are referred to as "cherrystones" and are suitable for eating in the half shell.

Surf clams are used mostly for bait and sometimes for chowder. Surf clams are usually gritty but can be used in clam broth and cocktails if salt is added to counteract their sweetness.

When buying crabs, look for a weight of 3 pounds per dozen or better. There are about 100 crabs per bushel.

Crab meat is cooked, chilled, and sold by the pound according to the part of the body it is taken from.

Japanese crab meat is better in appearance than, but lacks the flavor of, the domestic product.

Lump meat comes from the large muscles that operate the back fins. Sometimes it is referred to as "Back Fin." It is white and considered the best grade.

Flake meat comes from the remaining part of the body and is also white.

Claw meat is the meat from the claws. It is dark colored and not very popular.

Body and leg meat is taken from both body and legs and is pinkish in color.

Canned crab meat grades are:

Fancy
Choice
Passed A
Fair

Lobster may be purchased live, boiled, or canned. Almost all of the lobsters sold in America are alive. They are kept alive in "Live Cars" and are removed according to the market demand.

Practically all of the canned lobster sold in the United States is imported.

Oysters are sometimes referred to as the names of the beds from which they are taken. For example:

(1) Bluepoints
(2) Cotuits
(3) Lynnhavens
(4) Saddle Rocks
(5) Sea Heaven

The limit or maximum to allow for bad oysters is 3%. A legitimate barrel of oysters will hold 3 bushels. Some barrels hold only 2½ bushels while others hold as much as 3½ bushels. Investigate before deciding which barrel to buy.

Oysters should be plump, well shaped, gelatinous (but not watery), and slimy.

It is best to buy oysters by the number per gallon. Sometimes the terms "counts," "selects," etc., are interpreted erroneously in certain localities. Federal grades and specifications are as follows:

Federal grade	No. per gallon
Grade A	150-200
Grade B	200-250
Grade C	250-300

The commercial designation varies, but is fixed somewhat along these lines:

Commerical designation	No. per gallon
Counts	150-200
Extra Selects	200-250
Selects	250-300
Standards	300 and over

A bushel of oysters will yield about 1 gallon when shucked.

Shrimp of good quality must always be greenish-gray and firm.

The sizes for shrimp are divided as follows:

Shrimp size	No. per pound
Jumbo	15-20
Large	21-25
Medium	31-42
Small	43-65

When you purchase shrimp, make sure you get the correct type for the intended use. Fresh shrimp requires a lot of work in preparation. But, you can't serve a shrimp cocktail if you buy breaded frozen shrimp.

Canned seafood and salt water fish are popular items with many patrons. It is advisable to consult the United States Department of Agriculture (U. S. D. A.) requirements. For instance, bonita and yellow tail fish are not labeled as tuna by U. S. D. A. ruling.

Poultry is an item you will have to be very careful in purchasing. Learn the important points in poultry buying from tables 5 and 6.

Table 5. Points to Look for in Poultry Buying

Accept	Reject
Young	Old
Wide breast	Narrow, crooked breast
Full fleshed	Poorly fleshed
Short, stocky legs	Long, thin legs
Plump body	Poorly fleshed
Soft, tender flesh	Tough, muscular flesh
Perfect skin and flesh	Torn skin, bruised flesh
Well dressed	Poorly dressed
Dry-picked or semiscalded	Scaled at or over 170° F
Soft, glossy skin	Dry, discolored skin
Forzen or fresh hard-chilled	Packed in ice
Clean body	Dirty body
Clean vent	Dirty vent
Clean head	Dirty head
Clean feet	Dirty feet
Empty crop	Feed in crop
Fresh hips, legs and body	Green hips, legs, and body

Table 6. How to Tell Young Birds from Old Birds

Indication	Young	Old
Skin	1. Soft, glossy	1. Coarse, dark
Feathers	2. Few pin feathers	2. Mostly long hairs
Breast bone	3. Flexible cartilage	3. Hard and bony
Feet	4. Soft, smooth	4. Hard and rough
Legs	5. Short and soft	5. Scaly
Spurs	6. Soft, short	6. Hard and long
Neck	7. Smooth	7. Rough
Claws	8. Short, sharp	8. Long, dull
Wings	9. Joints yield	9. Joints stiff

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Classes of chickens.

Broilers - - - - - - - -	1½ 2½ lb.	8 to 10 weeks old. (Either sex)
Fryers - - - - - - - -	2½ 3½ lb.	14 to 20 weeks old. (Either sex)
Roasters - - - - - - -	Over 3½ lb.	5 to 9 months old. (Either sex)
Stags - - - - - - - - -	The stage of maturity between Roasters and Cocks.	
Cocks - - - - - - - - -	Mature male birds of any weight, with dark and toughened flesh.	
Capons - - - - - - - -	Unsexed male birds weighing over 4 lb. usually 7 to 10 months old, with soft and tender flesh.	
Fowl - - - - - - - - -	Mature female birds of any weight or age.	

U. S. Grades of chickens.

U. S. Special or U. S. Grade A---	Commercially Perfect specimens of any class.
U. S. Prime or U. S. Grade B----	The second highest grade of poultry.
U. S. Choice or U. S. Grade C----	The third highest grade of poultry.

In your specifications for poultry of any kind, remember to specify the method of plucking. The three methods commonly used are:

(1) Scalded.	Poultry that has been immersed in scalding hot water usually at a temperature from 170° F to 180° F.
(2) Semiscalded.	Poultry that has been plucked by immersing in hot water, usually at a temperature from 125° F to 130° F.
(3) Dry plucked.	Poultry that has been plucked without wetting the feathers.

"Finishing," in terms of poultry, refers to the type of feed that has been used to make the poultry more appetizing and juicy.

Milk-fed poultry has skin and flesh bleached by milk that is fed with the ration. The flesh is softened by fatty deposits throughout the connective tissue. The usual period of time for milk feeding is from 6 to 10 days.

Grain-fed poultry does not show evidence of milk feeding.

In purchasing poultry, you must specify the manner of dressing and delivering.

Fresh dressed poultry is poultry that has been hard chilled or frozen.

Fresh hard-chilled poultry has been hard chilled or frozen and shows no deterioration from freezing, and has not been held at low temperatures for more than 60 days.

Storage poultry has been held at low temperature for more than 60 days. Storage chickens should be checked for freezer burns, evidence of thawing and refreezing, etc.

Eggs should be bought by grade.

First, regardless of grade, there are some things to watch out for in buying eggs:

(1) The yolk should be well centered and only slightly mobile.
(2) The white should be clear and free from spots.
(3) The shell should be clean, sound, and normal.
(4) Large eggs should weigh 24 ounces per dozen (average).
(5) Medium eggs should weigh 21½ oz per dozen (average).
(6) Small eggs should average 17 oz per dozen.

You will have to decide which grade is proper for your mess. Make yourself thoroughly familiar with the specifications and weights so that you are sure to get your money's worth.

When you break an egg, look at the inside of the egg, at the "air cell." If the skin is the size of a dime, that egg is fresh; if the size of a nickel, it indicates staleness; if the size of a quarter, it indicates a very stale egg.

Eggs are a high-profit item, and at least one egg dish should appear on the menu every day.

Butter, like eggs, is a highly perishable product; you should purchase it as you need it. Two days' supply of table butter should prove sufficient. Cooking butter could be purchased in weekly supply, that is, if sufficient savings result from the larger purchase. Print butter has been proved very successful and on the whole is less wasteful.

Government grades and trades names for butter. The U. S. score grade of a lot of creamery butter is expressed in terms of an official U. S. score using whole numbers only. The U. S. score grades are from U. S. score 85 to U. S. 93 score inclusive. For example:

92 score and up	Extra
90-91 score	Standard or Extra
86-90 score	First
84-88 score	Second

Milk should be delivered daily and stored in a separate refrigerator as it is very susceptible to picking up flavors from other foods. Use only grade "A" pasteurized milk. Use either single-service containers or authorized bulk dispensers. Do not allow milk to accumulate in your refrigerator. If you find that you have an excess on hand, call your supplier and either reduce or cancel your next delivery. Also make sure that all of your dairy products are delivered in a refrigerated vehicle.

Milk and cream should be tested for specific butterfat requirements. The butterfat content differs in many States according to local legal standards.

Good drinking milk (Grade A) should contain at least 4% butterfat, which means that 4 pounds of butterfat is contained in every 100 pounds of whole milk.

When you buy cream, specify the amount of butterfat you want. Do NOT use such indefinite names as "light cream," "whipping cream," and so forth, when ordering.

Your local Board of Health or Camp Veterinarian (in camps where one is available) will give you the grades that are standard in your locality. The grades of cream are sometimes known as:

	Butterfat content
Light	18% to 20%
Medium	21% to 30%
Heavy	31% to 40%
Extra heavy	41% to 50%

The only way to determine the quality of cream is to accurately test it. Thickness of cream does not always indicate quality. Pasteurized cream will thicken with age, especially on the top of the can.

Cream for whipping should contain at least 32% butterfat.

To decide what grade of canned fruits and vegetables you ought to purchase, you should take into consideration these factors:

(1) Character of liquid
(2) Uniformity of size
(3) Absence of defects
(4) Degree of maturity
(5) Absence of odors
(6) Texture
(7) Consistency
(8) Finish
(9) Flavor
(10) Color
(11) Appearance
(12) Style
(13) Type
(14) Density of syrup

Most fruit items are packed in three grades, called:

Fancy Choice Standard

Most canned vegetables are packed in three grades, called:

Fancy Extra Standard Standard

There are exceptions to this general rule of packing canned foods in three grades. Some well known and important items packed in only TWO grades are:

Apples	Beets	Sauerkraut
Applesauce	Carrots	Spinach
Asparagus	RSP cherries	Sweet potatoes
Pork and beans	Grapefruit juice	Tomato catsup
Kidney beans	Okra	Tomato juice

The can sizes in which foods are regularly and commonly packed are:

Can size	Quantity
4 oz	4 oz
Buffet	8 oz
Picnic	11 oz
No. 1 Tall	16 oz
No. 2	20 oz
No. 2½	30 oz
No. 3	35 oz
No. 5	52 oz
No. 10	109 oz
No. 12	128 oz

You will be primarily concerned with can sizes Nos. 2, 2½, 3, 5 and 10.

A general suggestion may be made at this point. Don't be too sure that it is economical to buy the lower priced grades without careful investigation. The highest quality tomato puree is almost always the cheapest to use, even though the cost is almost always higher.

Become familiar with the qualities represented by, and usually sold under, the various brands of each wholesale house. Close Federal standards for fresh fruits and vegetables have not developed as rapidly as other types of grading because it was thought that under past methods of distribution the sale of produce by grades was impractical due to the very rapid changes in quality and the many stages of handling.

Today there are great advances being made in storage, packaging, and transportation methods. These advances call for standards in the great volume of produce.

The number of grades varies with the produce. Fruits are graded as:

(1) U. S. No. 1
(2) U. S. Combination
(3) U. S. No. 2
(4) Orchard Run
(5) Cull

Most vegetables are graded as:

(1) U. S. No. 1
(2) U. S. Fancy

Some of the common characteristics used in grading fresh fruits and vegetables are:

(1) Amount of decay
(2) Injury or damage by disease
(3) Injury in transit
(4) Degree of maturity
(5) Flavor
(6) Texture

Fresh fruits and vegetables should be purchased only as required, because they have short life in storage due to their high water content.

If you are fortunate enough to be near a large city, you will have no difficulty in obtaining quotations from three or four dealers. In smaller cities, you may be able to receive only one or two quotations.

A regular routine should be established for receiving price quotations from dealers. A suggested routine would be to call the dealers in the afternoon and get a price on all requirements for the following day. After you have the quotations, you may go to the market and pick out the merchandise or place an order by telephone.

In order to check this market quotation from the dealers, wise buyers make use of other professional sources of market information. Federal and local government releases with information concerning commodity food prices and other valuable data appear in daily newspaper and in mailed news letters. In addition to this, local trade sheets, radio programs, and commercial market reports give much useful information.

Fresh frozen vegetables and fruits. These frozen items are becoming more and more popular each year because they take less space to store, less labor and less time to prepare, have more eye appeal and, in most instances, cost less per portion. (The cost of fresh non-frozen items is generally greater because, when you prepare them for cooking, you lose 5% to 50% of their gross weight; also they generally require less cooking time, hence they evaporate less.) A good procedure in purchasing frozen vegetables is to obtain two groups of samples of each vegetable from the several "name" brands. From the first group of samples, cook one of each brand and test for tenderness, color, flavor, etc. From the second group of samples, thaw one of each brand and check drained weight for yield. Sometimes the highest priced pack will yield the lowest cost per portion. In using this procedure, remember that each brand will run uniform for the entire farm pack of the season, but no two seasons will run the same in quality; therefore, you should repeat this procedure each season at the beginning of each new farm pack.

Salesmen. Ninety-nine per cent of the salesmen who will visit you are hard-working, honest men, and specialists in their field. Cultivate their friendship and cooperation, but be business-like and do not let them take up too much of your time, which should be spent on more important matters.

You should limit salesmen's visits to one day each week. If they grumble, merely explain that their visits are welcome but that you just do not have time to see them every day. Always see that the salesmen get credit for your purchase.

Summary. In this chapter we covered procedures generally used in purchasing subsistence items for a food service activity. We particularly stressed the necessity of setting up specific procedures for the procurement of meat, seafood, poultry, dairy products, canned fruits and vegetables, and fresh fruits and vegetables.

In order to successfully purchase the items mentioned, we found it necessary to develop a specific set of specifications to fit our particular needs. We compare Government grades with standard trade names to help us do this.

We mentioned the food buyer's routine and stressed the fact that he should check all major deliveries. While he should not be responsible for every count and weight (his receiving clerk will do this), he should make certain that the quality and specifications of the received merchandise are in accordance with that ordered. All the effort put into

effective purchasing will be wasted if your receiving procedures do not insure the commodities are received in agreement with buying orders.

You are not expected to know each and every detailed specification after reading this chapter, but you are expected to familiarize yourself with the sources of such information and realize the importance of a good set of specifications.

Specifications can be drawn up to fit your particular needs. They are only guides to provide suitable buying standards for your operation. Remember, the uniformity and consistency of your purchases aid in maintaining that all-important and desired food cost.

Chapter 3

FOOD COST CONTROL

This chapter covers Food Cost Control. From it, you should learn:

First, how to maintain a daily food cost control.
Second, how to maintain food cost control records.

The operation of a mess or club, whether large or small, requires that supervision be exercised over purchasing, receiving, storing, preparation, and serving.

Your supervision consists of a system of controls. The number and extent of these controls denote how much supervision is being maintained.

Throughout all this manual, you will hear the word "control" used many, many times, perhaps so much that when you think of any phase of the operation of a food concession, no matter how small, you will automatically think of "control."

It would be well if your controls were as sensitive as a Geiger counter responding to radiation. Any activity, any change in your operation, would be reflected in your controlling records.

Profitable operation depends on thorough analysis of all of the business.

A good controlling system is divided into nine categories:

(1) Purchasing
(2) Receiving and inspection
(3) Portions
(4) Formula cooking
(5) Pricing
(6) Daily food cost system
(7) Daily food consumption record
(8) Daily analysis of sales
(9) Accounting

All these categories of the control system will be discussed in this chapter.

Chapter 1 covered menu pricing and planning; and chapter 2, purchasing procedures. The present chapter (3) deals with the various aspects of a food cost control system.

In food cost control, always use percentages. Well, nearly always. The lone exception might be in the following story: It seems that a certain employer dispatched three women to cook for fifty men in a lumber camp. He gave instructions that it would not be necessary to furnish a detailed analysis of the food cost, all that was required was the cost percentages.

They submitted the following report: After one week operation;

"2% of the men married 33 $\frac{1}{3}$ % of the women."

With that lone exception, perhaps, you should always base the final analysis of your food cost control on your percentages. Percentage analysis is the most accurate means of studying your overall operation.

It is easier to use percentages as an index than the actual figures. The reason is very simple: Your actual figures will vary, whereas your percentages remain constant. Your total sales from one month to the next may vary several hundred dollars, while the percentages should remain stable; that is, if your controlling system is successful.

As an example; suppose that the totals of your summaries of operations were as follows:

	June	July
Income	$5,100	$6,375
Food cost	2,040	2,805
Payroll	1,275	1,466.25
Other expenses	1,530	1,848.73
Net profit	255	255

From these summaries of operations you know that your total sales were $1,275 more in July than in June, but upon further analysis you find your net profit remained at exactly the same figure.

By looking at these two sets of figures it is very difficult to determine the reason your net profit remained the same. If your total sales is increased, your other expenses may be increased.

By using percentages of the operating costs, you may reach this final analysis:

	June		July	
Income	$5,100	100%	$6,375	100%
Food cost	2,040	40%	2,805	44%
Payroll	1,275	25%	1,466.25	23%
Other expenses	1,530	30%	1,848.73	29%
Net profit	255	5%	255	4%

By using percentages, you can easily see why your profit remained the same. You find:

	In June	In July	Increase or decrease July over June
(1) Food cost amounted to	40%	44%	+4%
(2) Payroll amounted to	25%	23%	-2%
(3) Other expenses amounted to	30%	29%	-1%
(4) Net profit resulting	5%	4%	-1%

Comparing these summaries of operations, you find your food cost percentage has increased 4%, your payroll decreased 2%, other expenses decreased 1%, and your net profit was reduced by 1%.

So you see that the food cost alone was responsible for your decreased profits. A good food cost controlling system would have detected this rise in the food cost percentage as soon as it began to develop.

Food cost control does not mean buying the cheapest food items and serving substandard portions at a high menu price.

Food cost control is, in fact, just the opposite. It means buying the best quality and serving a standard portion at a marginal menu price. Profitable operation stems from your VOLUME of business. In order to know what your food cost should be you should know the percentages of the food cost dollar.

A general average would be the following:

Food item	Food cost dollar (percent of)
Meats	24.0
Poultry	12.0
Seafood	8.0
Produce	17.0
Potatoes	2.0
Eggs	4.5
Butter	5.5
Milk and cream	5.0
Coffee and tea	2.0
Groceries	11.0
Ice cream	2.0
Pies and cakes	3.0
Bread and rolls	3.0
Cheese	1.0
	100.0%

Remember, this is merely a general average and, of course, it will vary from one eating establishment to the next. You can make up your own percentage food cost dollar chart; however, your expenditures should remain about the same once you have established these percentages.

A simple daily food cost system is to maintain a form with a column for each division of your food cost dollar or perhaps more depending how extensive you wish to make this breakdown. The greater the number of individual items on your daily food consumption record, the tighter the control.

Each morning take your requisition slips (or the particular method your storeroom uses to issue food to the various departments) and enter the amounts of each of the food items on your daily food consumption report. Such a daily account will enable you to discover immediately any sudden increase in the amount of food being used.

With the same basic menus and normal turnover, the amounts of food should remain about the same. If you notice an increase, check for the following causes:

(1) Portions too large
(2) Standard formulas not being used
(3) Overpreparation
(4) Excessive waste
(5) Pilferage

Any of these five can cause your profits to disappear. Each of these factors is equally important.

Here is a sample of a daily consumption record:

Table 7. Sample Daily Food Consumption Record

Day	Butter	Milk	Cream	Cheese
1st	12 lb	50 ($\frac{1}{2}$ pts)	2 qts	2 lb
2nd . . .	11 lb	48 ($\frac{1}{2}$ pts)	2 qts	3 lb
3rd . . .	14 lb	52 ($\frac{1}{2}$ pts)	1$\frac{1}{2}$ pts	2$\frac{1}{2}$ lb
4th . . .	17 lb	50 ($\frac{1}{2}$ pts)	2 pts	3 lb

By maintaining a simple record such as this, you will have a clear insight into the amount of each food item being used.

For instance, you can see on the 3rd day the amount of butter you used suddenly jumped 3 pounds from the previous day and on the 4th day jumped another 3 pounds. In two days your butter consumption increased 6 pounds. This is a warning signal. Apparently the volume of business did not increase because the other items remained about the same, so evidently there has been mismanagement in some phase of the operation.

Now let's consider those five causes of food cost increase listed above.

First, are dining room personnel serving the proper portions. Or, is the cook using butter instead of oleo for frying breakfast eggs?

Second, are your standard formulas being followed? This may be the cause. It may be that the chefs are using too much in their preparation.

The third and fourth causes seem unlikely in this particular instance.

The fifth cause to consider is pilferage. If you have ruled out all the other possibilities, this of course would be the factor to investigate. Butter is an expensive item as well as a small-sized item. It certainly would not be difficult for an employee, who is bent on stealing, to devise some means of taking this item. It may be carried out in a soiled uniform or even in a pocket or purse.

Pilfering is the most difficult "leak" to stop and there is no absolute solution to it. However, there are certain measures you can take that will reduce and discourage pilfering:

(1) Keep all storerooms and reefers locked.
(2) Have security for storeroom keys when not in use.
(3) Don't allow unauthorized persons to enter the storerooms.
(4) Don't allow bundles to be carried from the mess without proper authorization.
(5) Change keys to the storage facilities, especially when you change storeroom men.

There is one other factor which you probably will not have any control over and that is the layout. A very good layout would be one that had all the storage area located together in the rear of the building so that at night the whole rear of the building could be locked off from the rest of the building.

As it has been stated before by some very wise person:

25% of all people are honest, 25% of all people are dishonest, and the remaining 50% are as honest as you keep them. Whatever the cause of your food cost increase, it should be reflected in your Daily Consumption Record.

The next step in your control procedure is the Daily Analysis of Items Sold. Your cashier must be trained to perform part of this job, which consists of taking your day's menu and keeping a tally (right on the menu) of each item that was sold. The next day you or your food supervisor should enter these figures on your record.

A record for your daily analysis should look something like table 8.

Table 8. Sample Daily Analysis Record of Items Sold

Day	T-bone steak	Fried chicken	Roast beef	Shrimp	Cold Plate
1st . . .	14	22	22	40	15
2nd . . .	16	19	25	36	20
3rd . . .	12	20	30	42	28
4th . . .	18	17	24	39	23
5th . . .	19	21	26	41	34

Your daily analysis record figures will supply you with some very helpful information. From these figures you should be able to determine:

(1) How well each menu item is selling.
(2) If your food cost dollar percentages are well distributed.
(3) Whether or not your portion control measures are being carried out.

If a certain item is not selling well, it would be advisable to eliminate that item from the menu until you could determine the reason.

Perhaps your analysis of these figures will show that poultry dishes are very popular among your customers. If so, adjust your food dollar percentage to allow more for this item.

Your portion control can be very easily checked on the basis of your daily analysis figures. Let us for example consider the "T-bones." Your daily analysis for the fifth of the month (table 8) shows you sold 19 orders. Your records show that 70 portions were on hand. Upon inspection you find that you have 49 portions in the freezer.

It doesn't take an adding machine to discover that if you started with 70, and sold 19, that you should have 51 left.

On the basis of your findings, you have a shortage of 2 portions. You pay $.90 each for these portion-cut "T-bones." You may think this

is insignificant, but this is not the point! The question is: WHERE AND HOW DID THEY GO? Find out if you can and take corrective measures. Perhaps someone made an error in mathematics; you cannot afford these errors.

At this point, you may think that these records and reports are going to consume quite a bit of your time. At first they will, but after you have established yourself you will just about be able to tell at a glance when something seems out of line.

Your final daily record will be your food cost account. This may be elaborate in form, or can be simple as illustrated in table 9.

Table 9. Sample of Final Daily Record of Food Cost

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Date	Direct purchases	Storeroom issues	Total cost today	Total cost to date	Sales today	Sales to date	Percent of cost today to sales today (4) ÷ (6)	Percent of cost to date to sales to date (5) ÷ (7)
Aug 1...	$200	$60	$260	$260	$475	$475	54.7%	54.7%
Aug 2...	180	40	220	480	430	905	51	53
Aug 3...	210	70	280	760	528	1,433	53	53

The above form is very simple; the possibilities of enlarging this record are almost countless. This form gives us the vital information which we should keep daily. To explain table 9:

Column 1. The date.

Column 2. The daily total of direct purchases. (Direct purchases are all food items which are received and issued directly to the kitchen or pantry. All other food items are stored for further use.)

Column 3. Items that are issued from the storeroom to the using department are charged out as storeroom issues.

Column 4. The total amount of food cost for this day. Direct purchases are added to the storeroom issues for this figure.

Column 5. The total food cost to date. The figure you enter in this column is a cumulative total of all previous days in the month. Thus, the figure on August 3 includes the total food cost for August 1, August 2, and August 3. For the first day of August there is, of course, no previous figure.

Column 6. The day's total sales.

Column 7. The total sales to date. An accumulative total. The figure in column 6 is added to the previous figure in column 7 and the total is brought forward on this line.

Column 8. The relation of your food cost to your sales expressed in percentage. To arrive at this figure, divide figure in column 4 by figure in column 6, and enter result as a percentage in column 8.

Column 9. The percentage of your food cost to date to sales to date. To obtain, divide figure in column 5 by figure in column 7, and enter result as a percentage in column 9.

Figures in columns 8 and 9 will give you final food cost percentage analysis which is whether or not you are staying within your allowance.

If the analysis shows you are within your allowance then it means that your menu pricing and planning has been successful, that your portion control has been carried out, that the standard formulas have been used, and that your entire food cost system is effective.

If by analysis of your final figure you find that your percentage is not within your allowed figure, then you must investigate your food cost control system to determine the reason.

On the basis of the figures on this sample form (table 9), it must be assumed that this operation is based on a 53% food cost because this seems to be the prevailing figure. Now if 53% is not the operation figure you want, you have an analysis so you can make adjustments.

Summary:

Food cost control is essential in food service activities.

You have read the basic controls and the records to be kept. There are nine categories of a good controlling system:

(1) Purchasing
(2) Receiving and inspection
(3) Portions
(4) Formula cooking
(5) Pricing
(6) Daily food cost system
(7) Daily food consumption record
(8) Daily analysis of sales
(9) Accounting

Most of these controlling procedures are gone over in detail throughout this manual.

Your final analysis will be your percentage. The reason you use percentages is to establish a standard for comparison.

Profitable operation means serving the best quality food in standard portions at a fair menu price. This can only be achieved by food cost control.

Every eating establishment should have a food cost dollar breakdown which is nothing more than the percentages of the various food items that make up your food cost. Your food cost dollar is directly dependent on the likes and dislikes of your customers.

A daily consumption record should at least include all these items which go to make up your food cost dollar.

A daily consumption record will indicate any change in the quantities of food which are being used. If these changes do not seem justified, you should investigate the following five causes of food cost increase:

(1) Portions too large
(2) Standard formulas not being used
(3) Over preparation
(4) Excessive waste
(5) Pilferage

The daily analysis of sales is nothing more than the number of orders sold of each item on the menu. It shows:

(1) How well your menu items are selling; (2) If your food cost dollar is accurate; (3) Whether or not your portion control is being carried out.

On your food cost account, you should record your direct purchases, storeroom issues, total cost for that day, total cost to date, food sales for that day, total food sales to date and, last but not least, the all-important food cost percentage.

In all studies and analysis of food cost controls, emphasis is always placed on:

(a) Knowing food costs.
(b) Keeping accurate inventories of all foods purchased and used.
(c) Keeping accurate records of raw food costs.
(d) Careful menu planning.
(e) Using tested and standardized recipes.
(f) Serving standardized or measured portions.
(g) Buying by specification when possible.
(h) Checking food wastes, preliminary preparation, cooking losses, and plate waste.
(i) Figuring labor costs.

Analysis of accurate food cost information enables management to detect waste, misuse, or theft of food. Also, when accurate food cost information is available, it can be compared with food cost in comparable operations or with food cost in the same operation over different periods of time.

Chapter 4

PORTION CONTROL

"The man behind the steamtable can make or break you!" This is an old familiar statement in the food business and bears a lot of truth, as we are about to discover in this chapter on portion control. In this chapter you will learn the importance of portion control, how to obtain standard portions, and how to determine the edible yield from foods.

Successful food establishments are well aware of the importance of portion control. The successful food vendor spends hundreds, if not thousands, of dollars annually in portion studies. The size of the portion must be right because the cost is controlled within the menu price.

It is strongly recommended that you furnish your food personnel with a definite standing operating procedure for the serving of all food items. This standard portion list should be hand-lettered and placed near the serving area so that it can be easily checked by the chef and the servers.

A fair portion size is one that satisfies the majority of the customers and yields a reasonable cash return in accordance with your cost control.

You are probably saying to yourself, "how will I determine a fair portion size?" A solution is not easy to find. The answer must be determined from your experience, from opinions of your customers, and from your knowledge of food cost. No matter what size portion you decide upon, you will always get some complaints. But after you have taken into consideration all pertinent factors, and have studied your portion cost in relation to your menu price, you should establish a standard portion for each item on the menu.

This chapter deals with the importance of portion control, how to obtain standardized portions, and how to determine edible yields from food items.

Portion control is actually money control! You must control your portions to control your profits. The size must be right and controlled within the menu price. You should consider each portion as an investment in dollars and cents. You must make a given percentage for a fair return. You would not intentionally short-change your customers, yet you do this very thing when you do not serve standardized portions.

You must consider your customers' good will and continued patronage. You would not give a regular customer a small portion of food and cater to another customer by giving him a large portion. Sometimes this is done, not intentionally, but through carelessness and lack of supervision. You can hardly expect a waitress on a limited salary to be interested in your profits if the prospects of a tip for herself is in the making.

How to obtain standardized portions. Many of the large chain-type restaurants are serving food with ice cream scoops, whenever feasible. These scoops come in a variety of sizes and sell for a nominal price. The number on the scoop denotes the servings from one quart. Since a quart contains 32 liquid ounces, a No. "8" scoop will give eight orders per quart or approximately 4 ounces per scoop. However, don't try to portion everything with graduated scoops. Can you imagine the poor "eye-appeal" of a plate full of rounded mounds of food?

Mashed potatoes may be served with a scoop. The size of the scoop must be largely contingent on your selling price, overhead, and final percentage.

Whenever possible, foods should be portioned before they are placed in the steamtable. On the other hand, bulk items such as roasts, meat loaf, baked macaroni, and spoon bread should not be cut because they lose moisture easily. Eliminate the need for keeping cooked foods in the steamtable for long periods of time.

The size of the serving plate has a definite bearing on the size of a portion. A moderate size portion will look skimpy in a large dinner plate.

Mixed sandwich fillings should also be portioned. Cheeses and cold meats are sliced at a prescribed thickness.

Desserts are usually portioned to order or are prepared as individual portions. Unless your volume is great, pies, cakes, puddings, etc. should be portioned and plated as required.

With the use of ladles and standardized scoops, every type of mess can have its own portion control. The system will have to be under constant surveillance.

You should keep a record of the quantity of food prepared, then tabulate the servings on the guest checks and measure and subtract the leftovers. The result is the portions yielded.

At times, if this process seems too long and you honestly feel the process does not warrant the time and effort, at least you can concentrate on the expensive item--MEAT. A good method is to keep the meat plates stacked 15 high and keep this stack before the roast pan, with explicit instructions that they be used for roast only. When the stack is gone, keep a standby stack of 15 in the warming oven. Thus, the server will only have to keep track of the number of stacks. The scullery men must be trained to stack the desired number of plates on the steamtable, warming oven, or wherever you decide is best for that particular stack.

Paper souffle cups are very inexpensive and provide an efficient aid in portion control. Paper souffle cups come in assorted sizes. Good results are obtained with 3/4 -oz cups for items like grated cheese and other condiments not normally included in table setups.

The servers should be aware of the standard soup portion, which is approximately 7 ounces.

Train your servers to keep the lid on the soup container. While being kept hot ready for serving, soups evaporate at the rate of 35% per hour with the lid off and only 15% per hour with the lid on.

Good soups are made of rich meat stocks and choice ingredients; they should be handled with care. Don't weaken them with water. You can avoid water-weakened soup by adding the necessary amount of rich stock to restore the soup to its required strength, or by substituting a canned soup.

A small "portion" scale (usually graduated in 1/4-ounce increments) is essential in training personnel in the art of portioning. If you insist that they use this scale, they will soon develop a remarkable accuracy in this skill. Even after they are trained, keep this scale handy to periodically "spot-check" portions.

Many pieces of equipment are available today that will simplify your portioning problem. Such equipment (see table 10) is relatively inexpensive and will pay for itself in a short period of time.

Table 10. Portioning Equipment

Equipment	Size	Price (approx.)
Ice cream scoops....	30, 24, 20, 16, 12, 8	$2.50 each
Pie markers	5, 6, 7 cuts per pie	1.00 each
Portion scales	1/4-oz graduations	8.00 - 100.00
Electric slicer.....	Assorted sizes	100.00 - 300.00
Layer cake tins	9, 10, 11, 12 inches	2.00 dozen
Pie tins	6, 7, 8, 9, 10, 11 inch	1.00 dozen
Ladles	1 oz to 10 oz	2.00 each
Custard cups.....	3 1/2 oz up to 7 oz	2.50 dozen
Casseroles.....	4 1/2, 7, 10 oz	8.00 dozen
Pot pie dishes.....	5 1/2, 8, 14, 17 oz	4.00 dozen
Portion cups (paper).	1/4 oz up to 5 1/2 oz	2.50 thousand

The above list is not complete and the prices are not stable but approximate. Many restaurant supply catalogs, as well as magazines on food service activities, list complete portioning equipment and firms that sell it.

To give you an idea of how to figure portion sizes, you should know that an average stomach can hold from 2 to 2 1/2 pounds of solid and liquid food comfortably. There is "one pig in a hundred" so if you give him a double portion of everything through second helpings, you are better off than by filling your garbage cans with food left over on the other 99 plates.

Remember, also, that if you fill up a customer on the expensive main course, you deprive him of his necessary sweet and he will not be satisfied. Your proper portion size should round out something like this (table 11):

Table 11. Suggested Portion Sizes for 2-lb and 2½-lb Meals

Menu item	For 2-lb meal	For 2½-lb meal
Appetizer	2 oz	3 oz
Soup	6 oz	7 oz
Salad	2 oz	3 oz
Vegetable	2 oz	3 oz
Potato	4 oz	4 oz
Meat	3 oz	5 oz
Bread and butter	2 oz	3 oz
Dessert	4 oz	5 oz
Beverage	7 oz	7 oz

You may not offer the soup, or the appetizer, or you may offer a choice; in any event, this does not alter the other portion sizes.

Yield. Yield is one of the most important factors you must consider in figuring portions. You must ask yourself on every item that is purchased, "What will be my return in portions, in ounces, and in money?"

Yield is especially important with fresh vegetables, meat, and poultry. For instance, out of every turkey that is purchased, you will only get a 33% yield; that is, of the weight you purchased, you will be able to sell only 33%. Thus, if you purchase a 25-lb turkey, you will be able to sell only about 8 lb of it. Some of your vegetables, such as fresh green beans or snap beans, will only give you about a 35% yield after they have been prepared and processed for cooking. When you think of yield, consider processing and cooking shrinkage. Remember, everything that is overcooked, such as roast beef, is like burning money. If a roast is left in the oven too long or cooked at too high a temperature, you will lose anywhere from 5% to 25% in weight over its normal cooking loss. In other words, out of every 100 lb of roast you overcook, you will lose between 5 and 25 lb over its normal cooking loss. Consider beef at 75¢ per lb and see what you have lost before it even reaches the customer. The same

with potatoes; you can easily lose between 5% and 15% of potatoes just by not watching the man who is peeling them. On every item you prepare, consider your average yield to determine if you are losing money in the preparation process.

How to determine edible yields. After you have bought your foods at a price for a maximum yield, you must set up a system for controlling your yield. This can be done by the methods mentioned earlier in portion control and by knowing the edible yields. It is up to you, if you are in charge of the food concession, to say what the yield will be. You have fixed the menu price in your cost control chart and posted it for the guidance of your chef and servers. Table 12 shows what your yield will be for meats; table 14, for vegetables.

Table 12. Approximate Number of Portions Yielded per Weight of Meat*

Meat	Amount	Portions Yielded
Beef		
Roast ribs	5 oz cooked	1 1/2 to raw lb
Roast sirloin	3 oz "	2 1/2 to raw lb
Pot roast	3 oz "	2 to raw bnls lb
Chopped beef	3 oz raw	5 to lb bnls chuck
Boiled beef, bnls	6 1/2 oz	2 1/2 to raw bnls lb
Boiled beef	8 oz bone-in	2 to lb bone-in
Short ribs	8 oz raw	2 to lb raw bone-in
Corned beef	3 oz cooked	3 to raw lb
Boiled tongue	3 oz "	2 1/2 to raw lb
Beef liver	3 oz raw	4 to raw lb
Meat balls	10 oz to 1 lb (2 pc)	5 " " "(10 pc)
Stew, bnls	Cut 12 pc to lb	4 " " "(3 pc)
Swiss steak	5 oz raw	3 " " "
Tenderloin steak	5 oz "	3 " " "
Sirloin steak	8 oz bnls	2 to bnls strip
Minute steak	4 oz raw	4 " " butt
Lamb		
Roast leg	3 oz cooked	2 to lb leg bone-in
Roast loin	3 oz "	2 to lb loin bone in
Braised breast	4 oz bnls	4 to lb bnls
Pork		
Tenderloin, breaded	3 oz raw	5 to raw lb
Sausage patties	3 oz "	5 " " "
Pork chops	5 oz (2 pc)	2 " " "
Spareribs	9 oz raw	1 3/4 to raw lb
Roast pork loin	3 oz cooked	2 1/2 to raw lb
Ham		
Steak, horseshoe	4 oz raw	2 to lb bone-in ham
Baked Ham	3 oz cooked	2 1/2 to raw lb
Boiled Ham	2 1/2 oz cooked	2 1/2 " " "
Roast fresh ham	3 oz cooked	2 1/2 " " "
Veal		
Stew, bone-in	Cut 12 pc to lb	3 to raw lb (3 pc)
Stew, bnls	Cut 16 pc to lb	4 " " "
Cutless bnls	3 oz raw	5 " " "
Calf's liver	3 oz "	5 " " "
Roast loin	3 oz cooked	2 " " "
Roast neck	3 oz "	2 " " "
Roast Shoulder	3 oz "	2 " " "
Loin chop	4 oz chop raw	2 " " "
Baked breast	8 oz raw	2 " " "

*Abbreviations: bnls = boneless
pc = piece, pieces

The items in table 12 can be lengthened to include all other meat and poultry items that you handle. Your chart (similar to table 12) should be hand-lettered in large print so the chef and meat carvers can readily see it without difficulty.

How NOT to determine edible yields. Do not leave it up to the chef. To give you an example of leaving it up to the chef, look at table 13, which is a recent analysis revealed on turkey yields: 145 tests made in a 5-month period showed differences in the number of portions obtained from a 16-lb turkey as follows:

Table 13. Results of Unguided Portion Sizing

No. of chefs	Portion size	Portions per turkey	Total portions
3	1¾ oz	40	120
15	2 oz	35	525
39	2½ oz	30	1,170
62	3 oz	25	1,550
16	3½ oz	20	320
10	4 oz	18	180
		Avg: 26	

At 40¢-a-pound, cooked turkey costs us $1.20, or 7½¢ per ounce. If we were to serve 2 ounces, it costs us 15¢; whereas, 4 ounces costs us double that, or 30¢.

How to determine edible yields for vegetables. See table 14.

Table 14. Approximate Number of Portions Yielded per Weight of Vegetables

Vegetables	Amount	Portions Yielded
Asparagus	4 stalks	5 to 2-lb bunch
" , fresh	2 oz	20 to 40-oz ctn
" , canned	2 oz	12 to No. 2 1/2 can
Beets, tops on	3 oz	3 to raw lb
" , canned	3 oz	25 to No. 10 can
Broccoli, fresh	2 1/2 oz	7 to 2-lb bunch
" , frozen	2 1/2 oz	13 to 40-oz ctn
Brussels sprouts	2 1/2 oz	7 to qt
" " , frozen	2 oz	13 to 40-oz ctn
Cabbage, fresh	4 oz	3 to raw lb
Carrots, tops on	2 1/2 oz	4 to raw lb
" , canned	2 1/2 oz	30 to No. 10 canned
Cauliflower, fresh	2 1/2 oz	6 to 2 1/2-lb head
" , frozen	2 1/2 oz	13 to 40-oz ctn
Corn on cob, fresh	1 ear	100 to bag
" , frozen	1 ear	12 to ctn
Corn, creamed	3 oz	33 to No. 10 can
" , frozen, whole kernel	2 oz	20 to No. 40-oz ctn
Egg plant, fresh	3 oz	4 to raw lb
Lima beans, fresh	2 oz	3 to lb in shell
" " , frozen	2 oz	20 to 40-oz can
" " , canned	2 oz	33 to No. 10 can
Mushrooms, fresh	2 1/2 oz	6 to raw lb
Parsnips, fresh	3 oz	4 " " "
Peas, fresh	2	2 1/2 to lb in shell
" , frozen	2 oz	20 to 40-oz ctn
" , canned	2 oz	33 to No. 10 can
Potatoes, boiled	4 oz	3 to raw lb
" , french-fried	3 oz	3 to raw lb
" , baked	9 oz ea	1 3/4 to rawlb
Snap Beans, fresh	2 oz	7 to raw lb
" " , frozen	2 oz	20 to 40-oz ctn
" " , canned	2 oz	33 to No. 10 can
Spinach, fresh	2 oz	4 to raw lb
" , frozen	2 oz	20 to 40-oz ctn
" , canned	2 oz	33 to No. 10 can
Squash, acorn	1/2 squash	2 to each squash
" , others	3 oz	2 to raw lb
Tomatoes, stewed	5 oz	25 to No. 10 can
Turnips	3 oz	3 to raw lb
Sweet potatoes	4 oz	3 " " "

How to determine edible yields for miscellaneous items. In table 12 you were shown the proper way to post edible yields for meats; for miscellaneous items that should be posted.

Orange and grapefruit juice. The average portion size is 3 oz. Florida oranges average about 5 gal of juice per case; California oranges, about 4 gal; Florida grapefruit, 4 gal; and California grapefruit, about 3 gal.

Canned grapefruit, pineapple, prune, and tomato juices. Portion size average 3 oz portions; 32 to No. 10 can; 15 to No. 5 can, and 6 to No. 2 can.

Grapefruit sections. Portion size, 5 oz (4 pieces, including some juice). Portions: 10 to No. 5 can, 4 to No. 2 can.

Fruit cup. Portion size, 3 ounces. Fresh: 40 portions to 1 gal; 24 portions to No. 10 can.

Fresh grapefruit. Portion size, ½ grapefruit (46's or 54's preferred).

Clam cocktail. Portion size, 3 clams. Counts are as follows:

	Barrel	80-lb Bushel	20-lb Peck	Size
Cherrystone	1,000-1,200	325-360	80-90	2"-4" wide
Little Necks . . .	1,800-2,000	500-640	125-160	1½"-2½" wide

Crabmeat cocktail. Portion size, 1½ oz; 10 portions to 1 lb.

Fresh shrimp cocktail. Portion size, 3 shrimp (Jumbo, 21-25 to 1lb size).

Oyster cocktail. Portion size, 3 pieces on dinner. Counts are as follows:

	Barrel	½ Barrel	Bushel	Peck
Bluepoints	1,000-1,300	500-750	320-400	80-100
Half-shell	900-1,000	450-500	280-320	70-80

Soups. Portion size, 7 oz; 17 portions to 1 gal. Jellied soup; Portion size, 4 oz. 30 portions to gal. Keep lid on as it evaporates at the rate of 35% per hour with the lid off.

Desserts.	Amount	Portions yielded
Cake, 6" layer	$\frac{1}{8}$ cut	8 per cake
Fruits	4 oz	24 to No. 10 can
Puddings	4 oz	30 to gal
Ice cream, No. 16 scoop	- - - -	64 to gal
Pies	$\frac{1}{7}$ cut	7 to each pie
Cream	$\frac{3}{4}$ oz	40 to qt
Butter	1 pc	64 pieces to lb

Leftovers. No one would think of calling $10 or $20 left in the cash register "leftovers." Many of these "leftovers" can be frozen and used later in other dishes. AR 40-5, Preventive Medicine contains information on the safe handling of leftovers to prevent food poisoning. The logical solution is to cook foods in small enough quantities so that you run short rather than produce too much.

In this chapter, you learned the importance of portion control, some of the aids you can obtain to help you in achieving standard portions, and the estimated yields from some of the food items you expect to be selling.

Chapter 5

FORMULA COOKING

It is the practice of many managers or supervisors of a food service activity to leave the cooking up to the chef. This practice is very successful and acceptable; as long as the manager or supervisor insists that the chef use a standard recipe and follow it to yield a standard product that his customers become familiar with and order with confidence.

Visit several well known chain-type restaurants and discover for yourself that most of them use formulas. When you visit such restaurants, discuss formula cooking with the manager or chef. This research on your part will open your eyes to formulas. Remember that you are taking this course to become a better manager and that the best modern managers use formulas to standardize quality and costs.

There is very little difference between the cooking done by a chef, and by an ordinary cook using a good standard formula. You cannot hope for a standard product where the list of ingredients is inaccurate, the instructions are not clear, or the cooks are careless in their assembling and preparation. A good standard formula not only lists the essential ingredients but the correct procedures to follow. It is obvious that a standard formula serves you in many ways, and several purposes of a standard formula are explained later on in this chapter.

The definition for a formula, as used in food service, is nothing more than a recipe that has proved successful. But in the food service business, it is not enough to follow a formula. The formula you use must be a standard formula. With a standard formula, you know the specific ingredients and the exact amounts of those ingredients. Restaurant experience has taught that the best way to obtain a specific amount of a certain ingredient is by weighing.

If you are fortunate enough to have school-trained cooks in your establishment, formula cooking will present no difficulties. Because of their training, these men recognize the advantages of standardized cooking and will apply this knowledge on the job. You should insure that the other cooks also recognize the advantages to be gained.

In this chapter, we will learn how to construct formulas, how to control your portions, and how to control your ingredients.

What is the purpose of a standard formula? "To insure that the quality of the food remains the same." You will get the same quality each time if you follow a proven and tested formula.

Food cost control is dependent upon a standard formula.

How can you obtain an accurate cost analysis if you do not know the exact amount of ingredients that go into the product?

Portion control cannot result unless you use the same amount of each ingredient every time you prepare a dish. As an example, try the recipe for Scalloped Potatoes and Ham (Table 15):

Table 15. Sample Recipe, Showing Cost

Scalloped Potatoes w/Ham
(serve 7-oz portions)

100 portions	Amount	Unit price	Total price per unit
Potatoes	24 lb	$0.03 per lb	$0.72
Oleo	1 lb	.23 " "	.23
Flour	1 lb	.05 " "	.05
Salt	4 oz	.03 " "	.01
Pepper	1 oz	.26 per oz	.26
Milk	1½ gal	.64 " gal	.96
Ham	14 lb	.54 " lb	7.56
Total price			$9.79
Price per portion			$0.0979

First you would add the total cost of all ingredients in the 100-portion recipe. By moving the decimal point to the left, you get the cost for one portion.

Now, suppose you wanted to reduce your cost of the same menu item, but still adhere to the standard formula system. You would adjust the recipe by reducing the amount of an expensive ingredient and increasing (by the same amount) a less expensive ingredient. For instance, you could use only 10 pounds of the expensive ham instead of the 14 pounds called for in the formula. Then you would have to add 4 more pounds of potatoes. Table 16 shows the adjusted recipe.

Table 16. Sample of Adjusted Recipe

(Scalloped Potatoes w/Ham)

Yield: 100 portions

Ingredient	Amount	Unit price	Total price per item
Potatoes	28 lb	$0.03 per lb	$0.84
Oleo	1 lb	.23 " "	.23
Flour	1 lb	.05 " "	.05
Salt	4 oz	.03 " "	.01
Pepper	1 oz	.26 " "	.26
Milk	1½ gal	.64 " gal	.96
Ham	10 lb	.54 " lb	5.40
Total price (adjusted recipe)			$7.75
Price per portion (adjusted recipe)			$0.0775

Your original formula (table 15) called for 24 pounds of potatoes; you have added 4 pounds to your original formula. And you have reduced the amount of ham from the original 14 pounds to 10 pounds. With your adjusted recipe, you must refigure the cost of the adjusted formula and the portion cost.

Thus, reducing the amount of expensive ingredients can be done only when you cook by formulas. It gives you a simple method of cutting portion costs through control of the expensive ingredient.

Remember, MEAT is usually the EXPENSIVE INGREDIENT. Always keep the amount of meat under control and you can cut the portion costs. This is very much the case in your lunches and low-cost meals. You can serve at least one low-cost meal for dinner and the cheaper dishes for lunch will attract more customers.

Always bear in mind that EXPERIENCE CANNOT BE SUBSTITUTED FOR STANDARD FORMULAS.

Formulas are very important to a successful messing operation because they represent an accumulation of KNOWLEDGE, WRITTEN and FILED for use by all personnel in the activity. There is usually a frequent turnover in food personnel. Nevertheless your quality of food need not be impaired if you keep a close check on your formulas. Moreover, as your formula system grows and subsequent cooks add an idea here and there to improve a particular dish, you have an invaluable reference and a business-building asset that will be increasingly more valuable as time goes on.

This chapter will not burden you with numerous formulas for the many items you will be using on your menus. There are many fine books on food preparation, and you should choose the one that is most applicable to the needs of your establishment,

It would be more practical to give you a few sample formulas to give you an idea of formula cooking and you can prepare your own system.

A good system of formula cooking, one used by restaurants throughout the country, is based on individual recipes. In fact, Army Recipes TM 10-412, the official guide to food preparation in all Army messes, is patterned after the card system used by the restaurant industry.

One of the main features of the standard recipe card is the listing of the ingredients and the amounts required. By simply reading the recipe card and making a simple mathematical computation, an ingredient list can be turned in to the storeroom in a matter of minutes. The cooks simply need to know the number of portions you want prepared. For example, the recipe for 25 portions of Beef Stroganoff calls for 10 pounds of lean tenderloin tails; your estimate is for 75 portions. Thus, the cook simply has to multiply 10 x 3 and request 30 pounds of this particular ingredient from the storeroom man.

There are other factors to consider when you plan your menu. Remember the amount and limitations of your equipment. How many people do you have on duty? How much business do you estimate?

Suppose that you have decided on Browned Beef Stew for an entree. From your cost control (Chap 3), you know that your required amount of Browned Beef Stew is approximately 3 gallons. The cost of all ingredients amounts to $10. You are striving for a 40% food cost. You will have to multiply the cost price of $10 by 2.5 to determine how much menu sales will be required.

Browned Beef Stew weighs 128 oz per gal. 3 x 128 oz = 384 oz for your yield. Divide the menu sales price (40¢) to find out how many servings are required. $\frac{\$25.00}{\$0.40} = 62.5$ or 63

You have arrived at the total number of ounces in your fixed yield: $\frac{384}{63}$ ounces. 384 = 6-oz serving.

63 servings @ 6 oz each x 40¢ equals $25.

This chapter has been devoted to formula cooking. The importance of formula cooking has been established and it is agreed upon that for any successful messing operation to remain a success, you must stay away from slipshod practices of cooking. The purpose of standard formulas are many. They control the cooking operation so that you can expect a high standard of quality and keep it the same even during and after personnel changes. You are able to construct and adjust a standard formula. By following a standard formula, you can simplify your portion control, and can control your ingredients. You know the importance of accurately weighing all ingredients as a means of control.

RATIOS AND EXTENDERS. By ratios is meant the amount of the expensive ingredient in a formula compared with less expensive ingredients. The less expensive ingredients are called "extenders". For instance, if you are using four pounds of beef and four pounds of vegetables in a gallon of stew, this would be a 50-50 ratio.

This percentage can be bought down to 25% by the simple process of slightly reducing your "ratios" and portion sizes of meats and substituting "extenders."

Sometimes you may be called upon to produce a very inexpensive meal. By ratio control, many dishes can be produced for a very low cost ranging from 6¢ to 17¢. Sample dishes are shown in table 17.

Table 17. Sample Low-cost Dishes, Showing Ratio Control

(6¢ to 17¢ entrees)

Menu item	Cooked weight	Raw weight	Rough price	Item cost	Order cost
Meat balls	2 oz	2 oz	$0.32 lb	$0.06	
with spaghetti	4 oz	1½ oz	.12 lb	.01	
and tomato sauce	3 oz	3 oz	1.28 gal	.03	$0.10
Chili con carne	2 oz	4 oz	.32 lb	.06	
with beans	4 oz	2 oz	.08 lb	.02	
and biscuit	2 oz	1 oz	.01 each	.02	.10
Creamed chipped beef	1 oz	1 oz	.64 lb	.04	
cream sauce	5 oz	5 oz	.70 gal	.03	
biscuit	2 oz	1 oz	.01 each	.01	.08
Hungarian goulash	2 oz	4 oz	.32 lb	.08	
gravy	5 oz	10 oz	.70 gal	.02	
dumplings	2 oz	1 oz	.01 each	.01	.11
Browned beef stew	2 oz	4 oz	.32 lb	.08	
gravy	3 oz	3 oz	.70 gal	.02	
noodles	4 oz	1 oz	.12 lb	.01	.11
Corned beef hash	2 oz	4 oz	.32 lb	.10	
stock	2 oz	2 oz	.70 gal	.02	
potatoes	5 oz	5 oz	.06 lb	.01	.13
Escalloped ham	2 oz	4 oz	.40 lb	.10	
cream sauce	4 oz	4 oz	.70 gal	.02	
potatoes	3 oz	3 oz	.06	.01	.13

Table 17. Sample Low-cost Dishes, Showing Ratio Control---cont.

Menu item	Cooked weight	Raw weight	Rough price	Item cost	Order cost
Diced ham	2 oz	4 oz	$0.40 lb	$0.10	
lima beans	4 oz	2 oz	.12 lb	.02	
stock	2 oz	2 oz	.70 gal	.01	$0.13
Ham and macaroni	2 oz	4 oz	.40 lb	.10	
macaroni	5 oz	1½ oz	.12 lb	.0	
Spanish sauce	3 oz	3 oz	1.28 gal	.0	.13
Baked noodles	4 oz	1 oz	.12 lb	.01	
ham	2 oz	4 oz	.40 lb	.10	
cheese	¼ oz	¼ oz	.85 lb	.02	
cream sauce	3 oz	3 oz	.70 gal	.02	.15
Chow mein (pork)	2 oz	2 oz	.48 lb	.06	
with noodles	2 oz	½ oz	.12 lb	.01	
and rice	2 oz	½ oz	.12 lb	.01	
and vegetables	3 oz	3 oz	.12 lb	.02	.10
Creamed ham	2 oz	4 oz	.40 lb	.10	
green peppers	1 oz	1 oz	.12 lb	.01	
biscuit	2 oz	1 oz	.01 each	.01	
cream sauce	4 oz	4 oz	.70 gal	.02	.14
Veal stew	2 oz	4 oz	.36 lb	.09	
noodles	4 oz	1 oz	.12 lb	.01	
gravy	3 oz	3 oz	.70 gal.	.02	.12
Veal ragout	2 oz	4 oz	.36 lb	.09	
dumplings	2 oz	1 oz	.01 each	.01	
gravy	5 oz	5 oz	.70 gal	.03	.13
Baked macaroni	4 oz	1 oz	.12 lb	.01	
cheese	½ oz	½ oz	.40 lb	.01	
cream sauce	4 oz	4 oz	.70 gal	.04	.06

This list could be extended, but enough examples have been given to convey the idea of ratios in bringing costs down to meet a required figure. The meat in each case is the expensive ingredient and can be increased or decreased to meet any cost required. From past research, it is known that it is vitally important to control the ratios. For example:

(1) A ratio of 3 or 5 lb of meat per gallon of stew raises the portion cost from 8¢ to 18¢.

(2) 1 to 3 ounces of cooked chicken @ $1.44 per lb increases the portion cost from 9¢ to 27¢.

(3) 3 to 5 eggs used in a lemon sponge pie increases the cost per pie from 9¢ to 15¢ for the eggs used.

List of menu items. Table 18 is a sample list of entrees found to be popular in one club.

In table 18, each menu item is given a number, which should always remain the same, and can be used as a ready cross reference. In tables 19 and 20, the numbers, therefore, refer to the menu items listed in table 18.

Table 18 Listing of Entrees*

(Should include your popular best sellers)

1.	Braised Veal with Vegetables.	9.	Ham and Rice with Spanish Sauce.
2.	Baked Ham and Lima Beans.	10.	Ragout of Veal.
3.	Braised Beef and Vegetables with Buttered Noodles.	11.	Baked Spareribs with Sauerkraut.
4.	Chili Con Carne.	12.	Meat Balls and Spaghetti.
5.	Swiss Steak.	13.	Creole Beef with Spaghetti and Kidney Beans.
6.	Individual Beefsteak and Mushroom Pie.	14.	Braised Shortribs of Beef.
7.	Browned Beef Stew.	15.	Lamb Fricassee.
8.	Baked Noodles and Ham with Cheese.		

*Note: This listing is used by the menu planner in selecting the items for the day's menu. To determine the number of portions he wishes to be prepared, he consults the record of previous sales.

How to use the entree list. The entree list (Table 18) is used by management as a basis for planning the complete menu. Next to each item you select for any one day, enter the number of portions you expect to sell. Prepare your menus and give a copy to your chef in ample time for him to plan his work and schedule the required labor. (See tables 19 and 20.)

Table 19. Sample Ingredient List

(Using menu item No. 3)

*3. Braised Beef and Vegetables with Buttered Noodles
(100 servings; 24 lb net)

Chuck, bone-in	34	lb
Onions	1 1/2	lb
Carrots, cooked	6	lb
Green beans, cooked	6	lb
Beef stock	3	gal
Noodles	10	lb
Oleo	3	lb
Fat	1	lb

*Note: The item number (3) refers to the selection on the menu list as posted in table 18. Also note that seasonings and spices are not included in this ingredient list. These items are drawn from the storeroom by their unit of issue (4-oz box, 1-lb box) and kept in the galley spice rack for use as needed.

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Table 20. Recipe Card

(Using menu item No. 3)

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3. Braised Beef and Vegetables with Buttered Noodles
(100 servings; 24 lb net)

Chuck, bone-in	34 lb
Onions	1½ lb
Carrots, cooked	6 lb
Green beans, cooked	6 lb
Beef Stock	3 gal
Paprika	2 tbs
Salt	4 oz
Bay leaf	1 leaf
Noodles	10 lb
Oleo	3 lb
Fat	1 lb
Flour	¾ lb

Cut beef into 1½-inch cubes. Brown beef and onions in fat. Add flour and brown. Add stock and seasonings. Bring to a boil and simmer 1½ hours, until meat is tender. Add diced, cooked vegetables and simmer 10 minutes. Cook noodles in boiling salt water 7 minutes. Drain and rinse under cold water. Add oleo to noodles.

Serve 8 oz of meat and vegetables over 5 oz of noodles. Approximate cost: 23¢ per portion.

* * *

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EXAM 372

Correspondence Subcourse Examination:

CLUB RESTAURANT OPERATIONS

PART II

U.S. ARMY QUARTERMASTER SCHOOL
FORT LEE, VIRGINIA

SUPPLY TRAINING CENTER OF THE ARMY SCHOOL SYSTEM

JANUARY 1974

Army-Fort Lee, Va.-517-74-300—D

QM 372 Credit Hours: 1

EXAMINATION ASSIGNMENT

SUBJECT	Club Restaurant Operations, Part II.
STUDY ASSIGNMENT	Review programed texts, PT 161, Sequences C and D.
SCOPE	Methods for determining the cost per cooked portions; food cost percentage; selling price of menu items; use of formulas and tables to determine food cost and selling price of a table d'hote meal; computation of gross profit and net profit; computation of accumulated food cost percentages.
OBJECTIVES	To test student attainment of lesson objectives and to emphasize points that have been previously studied.

EXAMINATION EXERCISES

REQUIREMENT. Exercises 1 through 6 are multiple choice. Each exercise has only one single-best answer. Indicate your answer for each exercise on the answer form.

1. When computing the portion cost per person for an entire breakfast menu, an individual portion cost of $.18 is written

   a. $0.18.

   b. $0.180.

   c. $.180.

   d. $.1800.

2. You are paying $1.10 per pound for cooked, boned, and rolled roast turkey. What is your cost for a 6-ounce portion?

   a. $.200.

   b. $.400.

   c. $.413.

   d. $.523.

3. Uncooked breaded pork tenderloin which has no loss factor costs you $.95 a pound. What is your cost for a cooked 10-ounce portion?

   a. $.593.

   b. $.594.

   c. $.640.

   d. $.713.

4. Roast beef costs $1.50 a raw pound. You want to serve a 4-ounce slice of beef to your customers. Roast beef has a 70% yield. What is your cost per cooked portion?

   a. $.105.

   b. $.280.

   c. $.400.

   d. $.536.

5. You are computing the cost of a dinner menu which includes roast duck costing $.86 per raw pound. Kitchen tests show that you will recieve a 61% yield. What is your cost for an 8-ounce cooked portion?

   a. $.7040.

   b. $.7049.

   c. $.705.

   d. $.71.

6. A recipe for salmon loaf yields 8 1/2 pounds; total cost of the recipe is $6.80. What is your cost for a 4-ounce portion?

   a. $.10.

   b. $.12.

   c. $.17.

   d. $.20.

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SITUATION: You, the Club Manager, have contracted to serve a banquet for 100 persons. You agree to serve the following menu at $3.75 per person. Your overhead expense is $50.00; the cost of labor and their meals is $60.00. Use the information in figure 1 to complete exercises 7 through 23.

TOMATO JUICE

RADISHES CELERY

BROILED T-BONE

BAKED POTATO STRING BEANS

LETTUCE WEDGE W/FRENCH DRESSING

HOT ROLLS ICE CREAM COFFEE

COST CONTROL SHEET
(FOR ENTIRE DINNER MENU)

Food Item	Size of Portion Served	Total Amt. to Purchase per Portion	Unit of Purchase	Cost per Unit	Portion Cost (Cost per person)
Tomato juice	4 oz.	4 oz.	qt.	.20	
Radishes	3 ea.	3 ea.	doz.	.10	
Celery	4 oz.	4 oz.	lb.	.15	
T-Bone Steak (Portion cut)	12 oz.	12 oz.	lb.	.98	
Potatoes	4 oz.	4 oz.	lb.	.06	
String Beans	2 oz.	2 oz.	lb.	.16	
Lettuce	1/4 hd.	1/4 hd.	hd.	.20	
Dressing	2 oz.	2 oz.	qt.	.46	
Rolls	2 ea.	2 ea.	doz.	.24	
Butter	2 oz.	2 oz.	lb.	.85	
Ice Cream	4 oz.	4 oz.	qt.	.64	
				TOTAL FOOD COST	1.1912

Figure 1. Cost Control Sheet, partially completed.

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7. Assuming that there is no loss factor, what is the portion cost for T-bone steak?

   a. $.6350.

   b. $.7300.

   c. $.7350.

   d. $.7400.

8. The portion cost for tomato juice is

   a. $.0150.

   b. $.0195.

   c. $.0200.

   d. $.0250.

9. The portion cost for dressing is

   a. $.0287.

   b. $.0475.

   c. $.0570.

   d. $.0575.

10. The portion cost for ice cream is

   a. $.0160.

   b. $.0400.

   c. $.0800.

   d. $.1600.

11. The portion cost for radishes is

    a. $.0025.

    b. $.0225.

    c. $.0250.

    d. $.0275.

12. The portion cost for celery is

    a. $.0350.

    b. $.0375.

    c. $.0400.

    d. $.0425.

13. The portion cost for potatoes is

    a. $.0076.

    b. $.0100.

    c. $.0114.

    d. $.0150.

14. The portion cost for string beans is

    a. $.0200.

    b. $.0266.

    c. $.0267.

    d. $.0800.

15. The portion cost for butter is

    a. $.0106.

    b. $.1060.

    c. $.1063.

    d. $.1262.

16. The portion cost for lettuce is

    a. $.0275.

    b. $.0500.

    c. $.1000.

    d. $.2000.

17. Each portion of rolls costs

    a. $.0200.

    b. $.0300.

    c. $.0400.

    d. $.0600.

18. The total amount of money guaranteed for serving the meals is

    a. $365.30.

    b. $375.00.

    c. $375.80.

    d. $380.00.

19. What is your total overhead and labor cost, including employee meals?

    a. $50.00.

    b. $60.00.

    c. $110.00.

    d. $115.00.

20. If the total food cost for the 100 meals is $119.12 and the amount guaranteed is $350.00, what is the percentage of the total food cost to the amount guaranteed?

    a. 34%.

    b. 37%.

    c. 40%.

    d. 43%.

21. If your total overhead and labor cost is $125.00 and your gross profit is $283.66, what is your net profit?

    a. $158.66.

    b. $165.66.

    c. $380.00.

    d. $408.66.

22. If the total food cost for the 100 meals is $120.00 and the amount guaranteed is $395.00, what is your gross profit?

    a. $220.00.

    b. $275.00.

    c. $295.00.

    d. $515.00.

23. A cottage cheese salad cost you, the manager, $.15 for the ingredients. You are selling the salad for $.55 on your menu. What is the food cost percentage for this salad?

    a. 27%.

    b. 35%.

    c. 40%.

    d. 45%.

24. You are selling a special steak dinner at a cost of $.50 to you. Your sales checks show that you sold 22 of these steak dinners. Your total cash receipts for these 22 dinners were $25.00. What is your food cost percentage for the meal?

    a. 44%.

    b. 48%.

    c. 52%.

    d. 58%.

25. At 0100 hours on 31 July your kitchen physical inventory revealed that you had $100.00 worth of food items on hand. During the day of 31 July the kitchen was issued $380.00 worth of food. At the end of the day, your kitchen closing inventory revealed that you had $50.00 worth of food left. What was the cost of foods you sold on 31 July?

    a. $150.00.

    b. $330.00.

    c. $430.00.

    d. $480.00.

26. On 11 May your cost for goods sold in the kitchen was $500.00. Your sales receipts for that day were $1,300.00. What was your food cost percentage for the day?

    a. 35%.

    b. 38%.

    c. 42%.

    d. 46%.

27. What is the accumulated food cost percentage through 2 March if a cost analysis of your kitchen operations is as follows?

Date	Cost of goods sold	Sales receipts	Daily food cost %
1 Mar	$125.00	$250.00	50%
2 Mar	$350.00	$500.00	70%

    a. 60%.

    b. 63%.

    c. 65%.

    d. 68%.

REQUIREMENT. Exercises 28 through 33 are true-false exercises. Indicate your answer on the answer form by using A for TRUE and B for FALSE.

28. Dividing the food cost percentage into the total food cost will give you the menu selling price for a meal.

29. Gross profit is the profit over and above the food cost only.

30. Net profit is the amount made over and above the food cost and overhead cost only.

31. The accepted practice for menu pricing is to round off the selling price of items to the nearest nickel.

32. The gross profit objective for a club is set by the Club Manager.

33. You divide your selling price into the cost of the meal to determine if the selling price meets the desired food cost percentage.